No Country for Old Media

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Abstract

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The philosophical defense of intellectual property theory has become a significant, and growing, area of inquiry over the past several decades. Copyright, the legal mechanism protecting creative works, is one major class of intellectual property rights. Modern intellectual property thought draws primarily from seventeenth- and eighteenth-century paradigms, which relied upon reasonable but implicit assumptions about durability of material substrates. Subsequent changes in how intellectual works are fixed physically, as well as practical experience with copyright implementation, challenge these assumptions about durability, and indicate the need for more circumscribed grants of intellectual rights. Yet copyright duration and scope increased substantially in the nineteenth and twentieth centuries, and the changes in media durability have gone largely unconsidered by recent theorists. As a result, modern adaptations of intellectual property theory extrapolated from Enlightenment-era models fail to afford sufficient value to preservation of creative works.

Many nineteenth- and twentieth-century media are inherently fragile or unstable, illustrating problems with the archetype of the long-term information carrier – for instance, newspaper and paperback books in print, daguerreotypes in photography, phonograph cylinders and shellac discs in audio, nitrate film and VHS tapes in visual media, and floppy disks in software-based media. The relationship over time between American copyright policy and preservation efforts is assessed for three multimedia formats: sound recordings, moving images, and video games. This set of historical analyses is employed to suggest revisions to modern intellectual property theories, offering a more robust conceptualization of what intellectual property is for and what it should accomplish in practice.

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Introduction

That is no country for old men. The young
In one another's arms, birds in the trees
– Those dying generations – at their song,
The salmon-falls, the mackerel-crowded seas,
Fish, flesh, or fowl, commend all summer long
Whatever is begotten, born, and dies.
Caught in that sensual music all neglect
Monuments of unaging intellect.[1]

So begins Yeats's "Sailing to Byzantium", written as he entered his sixties and countenanced the inevitability of his mortality. In Yeats's conception, life has become inhospitable to the aged, in a land fervently championing the youthful, the vibrant, and the new. His body breaks down and fails him – "An aged man is but a paltry thing, / A tattered coat upon a stick," he continues – and with the attentions of youth fixed upon what burgeons and blossoms, he cannot, through them, acquire renewed vitality. More with patient, almost nostalgic resignation than with bitterness, he concludes that, if he is to ward off the withering onset of senescence, he must leave the world of the spry and jubilant, and travel to Byzantium, idealized as a capital of timeless erudition and wisdom. There, he can discard his decrepit corporeal form, and pass on his lifetime of understanding to those most willing and able to absorb it and shepherd it for the future.

Yeats's poem is, in some sense, a parable, a plea to reconsider the value and contributions of old age against the saturation of culture with the concerns of the young. I want to suggest that the poem's parable also illuminates when reflected upon the status of modern copyright, both in theory and practice. I posit that copyright, in its theoretical oversights and in the effects of its practical implementation, has enabled a wide-ranging neglect of old and infirm creative works. The moral and legal rules for generation, duplication, and transfer of ideas and their expressions, collectively known as intellectual property, play major roles in shaping and governing the movement of information in modern society. A colossal body of scholarship has grown up around intellectual property as a concept, seeking to explain, justify, and critique its historical trajectory, theoretical underpinnings, and practical effects. Yet *preservation*, a concept (and practice) central to the continued survival and integrity of cultural works, has had little impact on intellectual property thinking, and thus, on conceptions of the proper functioning of copyright laws in the modern world.

The purpose of this dissertation will be to demonstrate, using historical and legal analyses and philosophical investigation, that, far from being a minimal oversight, the failure to address preservation concerns by intellectual property philosophers constitutes a trenchant challenge to

[1] William Butler Yeats, *The Tower*. Macmillan, 1928, pp. 1-3.

existing intellectual property theories. Absent preservation safeguards, theorists may defend, and policymakers may implement, intellectual property controls that threaten the works which those controls are intended to protect.

I will begin by illustrating the problem through an investigation of American sound recording copyright, showing the dangers intellectual protection can pose to information and culture when implemented with insufficient preservation accommodations. Copyright in the United States has lengthened and granted progressively stronger protections to works over time; sound recording copyright has become an extreme example of this tendency. All the while, historical audio, subsisting on physical formats that are often frangible and prone to degradation, encounters continuing and lengthening barriers to access, preservation, and re-use – perhaps condemned by inattention, as Yeats feared of his own body and soul, to obscurity and disintegration. In light of this, I wish to explore the following questions: what does an examination of the history and technology of physical media reveal that might influence thinking about copyright theory in particular, and about intellectual property principles more generally? Would such an analysis offer insight into how to conceive of appropriate copyright structure, duration, or scope, as reflected in philosophy, policy, and law?

The following set of historical and philosophical analyses of copyright, I will argue, reveal compelling reasons to circumscribe copyright's reach in principle and practice. The first analysis, of audio creative works, will lay the groundwork for a theoretical reevaluation of copyright doctrine. These theory revisions will then be applied more generally to other classes of intellectual creations, via analyses of moving image works and video games. Moving images and video games, like sound recordings, are now major conduits of technology-fueled creative expression, and are fixed on unstable fundaments. Since sound recordings are unique in the way they are handled by American copyright law, it is instructive to examine the copyright history of other media types, to see in what ways the policy history of these materials, and their own inherent properties of decay, reinforce (or challenge) conclusions drawn from the sound recording example.

This project is intended to be an exercise in applied analytical philosophy. It will seek to marshal empirical evidence drawn from historical, technical, legal, and policy documents in order to interrogate prior theories, thereby constructing and supporting a chain of logical reasoning. Thus, the dissertation will rely on two methodological pillars: *historical research methods* and *philosophical methods*.

Drawing from historical methods of documentary analysis, I will engage in a process of empirical induction. I will aggregate and critically evaluate the reliability of primary and secondary sources dealing with the history and theory of intellectual property, and identify patterns and narrative threads in a manner that verifiably incorporates relevant evidence as

completely, accurately, and transparently as possible.[2] In this, I draw from the historical tradition of multiple-source comparison and evaluation systematized by nineteenth-century Continental historians, which, with refinements, remains bedrock methodological principle for most historical investigation.[3] Assessment of these sources will involve processes of *interpolation* (arranging and interleaving different accounts in order to gain a more complete understanding of a historical phenomenon), *reasoning by analogy* (comparing historical phenomena which are similar in some relevant quality), and *refinement of hypotheses* (the provisional positing and subsequent revision of larger-scale insights drawn from the aggregation of empirical evidence and of competing interpretations of that evidence).[4] I intend for the quality of my descriptive and empirical claims to conform to the principle of *falsifiability*; my conclusions are always to be read as conjectures, as provisional understandings capable, in practice, of being evaluated by others according to mutually accepted standards, and subject to rejection in the face of sufficient contravening evidence.[5]

Concurrently, I will draw from analytical philosophy to construct a rational argument in defense of a philosophical position. I will assemble existing arguments in the field of intellectual property theory, singling out the most relevant (those theories that were most influential on subsequent thought) and the most promising (those theories that are, or should be, most likely to influence future thought). I will then critically evaluate and identify weaknesses in the logical argument structure or supporting evidence of those arguments. In doing so, I will engage in

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[2] Thus, the historical and documentary analytical work I do here will be largely positivistic in its approach, which I recognize is rather out of step with current intellectual fashions. Much twentieth-century historiography has assailed the empirical and realist underpinnings of prior eras of historical thinking, and many postmodern historians would readily respond to my assertions that it is impossible to create a fully objective account of the past (or the present), and that my scholarship will, of necessity, bear the marks of my own time, place, and social experiences. I grant these criticisms, and take it as a principal challenge to guard against willful or inadvertent omissions, oversights, manipulations, misleading rhetoric, and insertions of bias, to the best of my ability. I will present my sources fully and make clear the chains of evidence supporting my interpretations, serving as an invitation to current and future scholars to revisit and contest my conclusions based on new evidence or new lines of reasoning. Even if the ideal I espouse here is impossible to reach perfectly in practice, I maintain that responsible researchers are nevertheless duty-bound to aspire to it; in the words of the musicologist Carl Dahlhaus, "we ought not to fall prey too often to the temptations of letting ourselves be distracted by philosophical paradoxes from pertinent and eminently practicable tasks. It is bad scholarly form to mock the things we can accomplish by continually pointing out to those trying to accomplish them that their ultimate goals are unattainable." Carl Dahlhaus, *Foundations of Music History*. Cambridge, 1983, p. 104.

[3] Here I follow closely on the basic outline of Walter Prevenier and Martha Howell, *From Reliable Sources: An Introduction to Historical Methods*. Cornell University Press, 2001, pp. 69-87, esp. pp. 70-71.

[4] Prevenier and Howell, pp. 75-76. I eschew the hedged labeling of this systematic means of investigation as "'scientific method'", as Prevenier and Howell do on p. 76. Historians, given the uncertainty and irreproducibility of their objects of analysis and source materials, cannot hope, and should not feel compelled, to describe themselves as disciples of formal scientific method. Instead of viewing this as a scientific or quasi-scientific process, I align it with the broader tradition of empirical investigation as route to knowledge acquisition common to the physical sciences, the positivist and interpretivist social sciences, and documentary and textual scholarship (e.g., diplomatics, hermeneutics, philology, historical musicology, legal research) in the humanities. Major guides that lay out the basic idea of research I envision here include Jacques Barzun and Henry F. Gaff, *The Modern Researcher*. 5th edition. Houghton Mifflin, 1992; and Wayne C. Booth, Gregory G. Colomb, and Joseph M. Williams, *The Craft of Research*. 2nd edition. University of Chicago Press, 2003.

[5] Karl Popper, *Conjectures and Refutations: The Growth of Scientific Knowledge*. Routledge, 1963.

conceptual analysis, which envisions "philosophical hypotheses as claims about what concepts are like and how they are necessarily related to each other".[6] Incorporating the evidence found in the historical and documentary analyses, I will construct a novel argument, in ordinary language, which will conform to principles of inductive and deductive reasoning.[7] The argument will be *normative* in nature – i.e., concerned with *what should be*, with what one *ought* to do or to think – and will critique and extend prior normative arguments. Thus, this dissertation is fundamentally a project about *ethics* – the formation and defense of moral claims about what intellectual property should be in theory and what it should do in practice.

The scope of the philosophical argument I make will be restrained, in that it will seek merely to prove that concern for the long-term survival of intellectual creations ought to be a consideration integrated into intellectual property theory from basic principles. That is not to say it will be the cardinal concern, nor that it will *necessarily* trump other, countervailing values. Nevertheless, along the way, I will provide evidence to support the claim that preservation of creative works should be one of the most important animating values undergirding theories of intellectual rights. The argument is not intended to advocate explicitly for one or another of the major philosophies justifying intellectual property rights, and will not be narrowly applicable only to one, or a subset, of those theories. Rather, I hope to demonstrate that *any* sufficiently robust general theory of intellectual rights must weigh preservation as a value, if that theory is to be meaningful, functional, and successful in its implementation. Lastly, I wish to stress that the argument I lay out below does *not* endorse the *abolition* of intellectual property controls. It grants that there is strong belief in the necessity and value of some sort of intellectual rights protection from multiple viewpoints, and will endeavor only to identify where those protections ought to be mitigated or refashioned to comport with principles that account for the importance of preservation.

This document proceeds in seven parts. Part I defines the two principal concepts whose mutual tension motivates this study – preservation, and intellectual property – and offers an overview of the major philosophical defenses of intellectual property, which form a necessary background to the theoretical concerns presented later in the paper. Part II traces the history of, and philosophical justifications for, American copyright law, and shows how the establishment and expansion of sound recording copyright is both unusual and inductively revealing when juxtaposed with general copyright protection. Part III uses the example of sound recording technology to illustrate incongruities between intellectual property theory and copyright law in practice, and between the goals of copyright and its effect on preservation activities. It concludes

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[6] Chris Daly, *An Introduction to Philosophical Methods*. Broadview Press, 2010, p. 10.

[7] General guidelines for effective use of argument are systematized in, e.g., Booth, Colomb, and Williams; Irving M. Copi, Carl Cohen, and Kenneth McMahon, *Introduction to Logic*. 14th edition. Routledge, 2010; Steven M. Kahn, Patricia Kitcher, and George Sher, *Reason at Work: Introductory Readings in Philosophy*. Harcourt Brace Jovanovich, 1984; Julian Baggini and Peter S. Fosl, *The Philosopher's Toolkit*. 2nd edition. Wiley-Blackwell, 2010; Anthony Weston, *A Rulebook for Arguments*. Hackett, 2000; and Stephen Toulmin, *The Uses of Argument*. Cambridge, 1958.

that copyright controls as long and as strong as have been implemented in most countries are difficult to justify through any existing rational, principled intellectual property philosophy, particularly with respect to the inherent instability and fragility of newer forms of media. Part IV reconsiders philosophical justifications for intellectual property principles in light of the importance of preservation, arguing that intellectual property theory, as well as practice, has failed to account sufficiently for the problem of media fragility. Parts V and VI broaden the focus to the audiovisual media of moving images and video games, respectively, outlining their copyright histories as classes of intellectual goods, examining their physical patterns of decay, and refining the tentative conclusions in Parts III and IV to incorporate new insights. Part VII highlights aspects of intellectual property law that do reflect a concern for preservation, and explores potential legal and policy avenues for giving preservation appropriate weight in copyright practice.

I. Definitions

A. Preservation

A serviceable definition of *preservation* is the "protect[ion of] information of enduring value for access by present and future generations".[8] The work of preserving information is often (though by no means exclusively) done by librarians, archivists, and museum curators, and is, with access, one of the twin pillars of *archiving*, the task of "*preserving* and *making accessible* documents, records, and other data of enduring value".[9] Librarians and archival scientists often use the closely related term *conservation* alongside preservation; the distinction between the two is not rigid, and the terms are frequently treated as essentially interchangeable in lay usage.[10] The Society of American archivists differentiates conservation from preservation activities by stating that conservation "counters existing damage", while preservation "attempts to prevent damage".[11] Both have been used to refer to the profession of preserving and conserving information-bearing materials as a whole. Michele Valerie Cloonan proposes, "conservation generally refers to the physical treatment of individual library materials, while preservation

[8] Margaret Hedstrom, "Digital Preservation: A Time Bomb for Digital Libraries". *Computers and the Humanities* 31 (1998), pp. 189-202, at p. 189. Hedstrom's description is a slight tweaking of a definition of archival preservation offered in Paul Conway, "Archival Preservation in a Nationwide Context". *American Archivist* 53 (1990), pp. 204-222, at p. 206.
[9] Helen R. Tibbo, "On the Nature and Importance of Archiving in the Digital Age". *Advances in Computers* 57 (2003), pp. 1-67, at p. 8. Emphasis original.
[10] Some professional librarians and archivists substitute one for the other, as well, including at least one former Librarian of Congress; see James H. Billington, "The Moral Imperative of Conservation". In *Meeting the Preservation Challenge*. Association of Research Libraries, 1987, pp. 5-12. See also Michele Valerie Cloonan, ed. *Preserving Our Heritage: Perspectives from Antiquity to the Digital Age*. Neal-Schuman, 2015, p. xvii.
[11] "Conservation". Glossary, Society of American Archivists. Available at < https://www2.archivists.org/glossary/terms/c/conservation >. See also "preservation". Available at < https://www2.archivists.org/glossary/terms/p/preservation >.

refers to the care of library materials in the aggregate";[12] conversely, the Society of American Archivists poses that "conservation [as a profession] is often used to include preservation [profession] activities."[13] To simplify, I will use the word preservation consistently, with the implication that conservation activities are also necessarily included in its scope.

Building a general, unified definition and theory of preservation has proven difficult. Historically, writing on preservation has been dominated by practical and technical literature; the field's principles are manifest in the work its practitioners do, and philosophical reflections on the nature and meaning of preservation activities have been somewhat scarce, at least through the end of the twentieth century.[14] The difficulty is compounded by the breadth of preservation and conservation activities, which stretch across libraries, museums, archives, the protection of natural reserves, historical architecture and industry, archaeology, and the capturing of intangible cultural heritage – not all of whom use terms consistently.[15] Paul Conway attempted an omnibus definition grounded in resource management, couching it as "the acquisition, organization, and distribution of resources to prevent further deterioration or renew the usability of selected groups of materials."[16] A broader synthesis was suggested by Michele Valerie Cloonan, who endeavored to define preservation and conservation as worldviews with social and ethical dimensions, rather than as purely technical and practical terms.[17] She has introduced the concept of monumental preservation – "the preservation of everything that defines culture. It is preservation writ large, and it intentionally covers everything: records, works of art, natural habitats, and national living treasures, to name a few. Preservation tries to assure the survival of the human record. It is not just a technical or managerial activity; it is a social, political, and cultural activity as well",[18] thereby implicitly including intellectual property controls.

What the task of preservation means in practice tends to cluster around two distinct and rival (yet in many ways complementary) visions. On the one hand, preservation centers on the maintenance (conservation) of *physical* information objects that bear witness to human thought and history. The acquisition of works worthy of preservation is often itself considered a preservation activity.[19] Preservation may include the painstaking care of original artifacts in an

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[12] Michele Valerie Cloonan, "W(h)ither Preservation?" *Library Quarterly* 71 (2001), pp. 231-242, at p. 232. She later notes, "*Preservation* is an umbrella term that includes conservation and restoration." Cloonan 2015, p. xvii. Emphasis original. For a similar conceptualization, see also Christine A. Smith, *Yours Respectfully, William Berwick: Paper Conservation in the United States and Europe, 1800-1935*. The Legacy Press, 2016, p. 4.
[13] Glossary, Society of American Archivists.
[14] Cloonan 2001, pp. 238-239. This is also true outside of documentary preservation traditions; for the primacy of practice over theory in historical preservation of buildings, see Norman Tyler, *Historic Preservation: An Introduction to Its History, Principles, and Practice*. 2nd edition. Norton, 2009, p 18.
[15] Jukka Jokilehto, "Preservation Theory Unfolding". *Future Anterior* 3 (2006), pp. 1-9, at pp. 1-2; William J. Murtagh, *Keeping Time: The History and Theory of Preservation in America*. 3rd edition. Wiley, 2006, pp. 1-10; Cloonan 2001, p. 23; Cloonan 2015, p. xvii.
[16] Paul Conway, *Preservation in the Digital World*. Council on Library and Information Resources, 1996. Available at < https://www.clir.org/pubs/reports/conway2/index.html >.
[17] Cloonan 2001, p. 239.
[18] Michele Valerie Cloonan, "The Moral Imperative to Preserve". *Library Trends* 55 (2007), pp. 746-755, at p. 747.
[19] Karen F. Gracy, *Film Preservation: Competing Definitions of Value, Use, and Practice*. Society of American Archivists, 2007, pp. 142, 147.

attempt to keep them from changing from their current state, through actions such as storing the artifacts in optimal environmental controls and housing them in containers impervious to light, ambient pollutants, vermin, and human hands. It may include treatments designed to retard degradation, such as dusting, or soaking in preservative chemicals or fungicides.[20] It may include rebuilding portions of a damaged work so that it is usable again, so that it resembles some prior preferred state, or so that further damage is not as likely to occur; this is often designated *restoration*, or *conservation-restoration*.[21] On the other hand, preservation may include activities that seek to preserve the *intellectual content* of the artifacts (i.e., its copyrightable components) while showing less concern for specific physical manifestations.[22] Among these activities are copying (raw duplication and, often, dissemination of intellectual content), migration (movement of intellectual content from a failing physical substrate or data storage system to a more stable instance of that substrate or system), reformatting (movement of intellectual content from one substrate or system to another), and emulation (the mimicking of out-of-date digital programming systems to allow access to older digital files or programs).

Furthermore, preservation activities seek to not only preserve intellectual artifacts or content alone, but also *metadata* related to those intellectual objects – contextual information that describes the entity being preserved, demonstrates that its intellectual content has been maintained accurately, and ensures that the content is interpretable to future content delivery systems, languages, and cultures. Effective documentation of information about works, how they are internally organized, and how they have been (and/or should be) stored and managed,[23] is as crucial to archival work as acquisition, preservation, and the provision of access.[24] Archival and preservation institutions, drawing from the tradition of diplomatics,[25] formally attempt to guarantee the *authenticity* (or *trustworthiness*) of documents based on tracking and verification of *provenance* (to ensure initial authenticity), *original organization* (to preserve the context provided by the documents' creators, also known as *respect des fonds*), *chain of custody* (to

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[20] These more technical tasks (as opposed to a systems approach) are encapsulated by the definition of preservation proposed by the Society of American Archivists Glossary: "The totality of processes and operations involved in the stabilization and protection of documents against damage or deterioration and in the treatment of damage or deteriorated documents". L.J. and L.L. Bellardo, eds. *A Glossary for Archivists, Manuscript Curators, and Records Managers*. Society of American Archivists, 1992, p. 27.

[21] For a discussion as applied to film, see Penelope Houston, *Keepers of the Frame*. British Film Institute, 1994, pp. 126-127.

[22] The intellectual distinction between the physical item and the information it contains is sometimes known as the *carrier/content principle*. Ray Edmonson, *A Philosophy of Audiovisual Archiving*. UNESCO, 1998, p. 33. Available at < http://unesdoc.unesco.org/images/0011/001131/113127Eo.pdf >. See also Cloonan 2015, p. xvi.

[23] These three categories of metadata are known, respectively, as *descriptive*, *structural*, and *administrative* metadata.

[24] The International Association of Sound and Audiovisual Archives, for instance, names these four tasks – acquisition, documentation, access, and preservation – as the chief responsibilities of any archive. Dietrich Schüller, ed. *The Safeguarding of the Audio Heritage: Ethics, Principles and Preservation Strategy*. Version 3. International Association of Sound and Audiovisual Archives, 2005.

[25] Luciana Duranti, *Diplomatics: New Uses for an Old Science*. Scarecrow Press, 1998, p. 171. Duranti, at pp. 42-43, restricts diplomatics proper to the study of archival or administrative records, but the principles, she notes, are ultimately extensible to any document of enduring interest.

ensure persistent authenticity over time and space), and *integrity* (to safeguard documents from tampering or inadvertent corruption via effective management, caretaking, and vigilance).[26]

Ultimately, media preservation, properly done, will inevitably encompass *all* of these tasks – conservation of originals, transfer and transmittal of copies, and metadata assurance.[27] Where media can be kept shelf-stable and reproducible to the human senses, preserving the original carriers is a laudable, if often expensive, goal – particularly since copies often lose evidence-bearing characteristics, or fail to properly reproduce aspects of the experience (and even the content) of the original.[28] For example, even high-quality scans of paper documents may not adequately reproduce the paper texture or watermarks, and digital copies of cylinder recordings cannot conjure the feel of holding the fragile shell in one's hands, slipping it on to the mandrel of a playback device, and swiveling the heavy weight of the needle arm down into the groove. Yet to expect that all, or even most, works will be able to indefinitely retain their essential characteristics via their original, rightsholder-approved distribution formats is impossible; sooner or later, works will need to be copied to survive. The large-scale implications of this inevitability are manifest in the documentary history of Western civilization; the copying and recopying of manuscript texts over centuries was the chief means of preserving major works of thought and art from antiquity to the invention of the printing press (and for some time beyond).[29]

The idea that original media could be preserved indefinitely is, according to James O'Toole, a relatively new one, at least in archival communities. Prior to the twentieth century, many preservation institutions assumed that their mission would involve the transfer of intellectual content to new vessels.[30] In the early twentieth century, it became progressively more possible to preserve materials for longer periods. Preservationists incorporated insights from science and engineering that revealed mechanisms of material deterioration and the means for slowing, halting, or reversing that deterioration.[31] Correspondingly, concern for maintaining original physical objects rose. Yet later in the twentieth century, as the magnitude and expense of preservation activities, as well as the sheer number of possible attack points for document

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[26] Reagan Moore, "Towards a Theory of Digital Preservation". *International Journal of Digital Curation* 1 (2008), pp. 63-75, at p. 69. The nomenclature of the cluster of virtues comprising archival diplomatics, as well as the structuring of the interrelationships between them, sometimes differ slightly from author to author, but the same notes are rung consistently. See, e.g., Seamus Ross, "Digital Preservation, Archival Science and Methodological Foundations for Digital Libraries". *New Review of Information Networking* 17 (2012), pp. 43-68, at pp. 51-55; Luciana Duranti, "From Digital Diplomatics to Digital Records Forensics". *Archivaria* 68 (2009), pp. 39-66, at pp. 52-53.

[27] As non-traditional media libraries, museums, and archives have proliferated, institutional practices have increasingly demonstrated the need for a well-defined, holistic philosophical orientation toward preservation. See Ray Edmonson, "Sacrilege or Synthesis?: An Exploration of the Philosophy of Audiovisual Archiving". *Archives and Manuscripts* 23 (1995), pp. 18-29; and Edmonson 1998, pp. 24-26.

[28] David M. Levy, "Heroic Measures: Reflections on the Possibility and Purpose of Digital Preservation". *ACM Digital Libraries 1998*, pp. 152-161.

[29] David M. Levy, "Fixed or Fluid: Document Stability and New Media". *Proceedings of the Sixth European Conference on Hypermedia Technology (ECHT)*. ACM, 1994, pp. 24-31, at p. 29.

[30] James M. O'Toole, "On the Idea of Permanence". *American Archivist* 52 (1989), pp. 10-24.

[31] O'Toole, p. 17.

erosion or destruction, became more apparent, some archivists gradually retreated from thinking of archival work as being driven primarily by establishing physical permanence of originals.[32] Duplication and migration have once again returned to prominence in archival thinking,[33] as evidenced by the implementation of large-scale mass digitization projects, especially of books and journals, in the twenty-first century. Copymaking is thus central to twenty-first century preservation work – which makes the moral and legal status of copymaking central to that work as well.

The chief value of preservation is that it retains evidence of human activities for future understanding;[34] in Cloonan's words, it "allows for the continuity of the past with the present and the future".[35] This is manifest in the etymological roots of the word preservation, derived from the Latin *praeservare* – to keep or protect beforehand.[36] The activities of preservation and conservation ensure the survival of *cultural heritage* – the "monuments, habitats, artifacts, ideas, beliefs, and oral and written communication that have survived and/or have been documented."[37] Preservation of human activity is a necessary substrate for any attempt to understand the past; it makes history – the history of anything, and anyone – possible. "Awareness of the past is in myriad ways essential to our well-being", David Lowenthal asserts.[38] It is "essential to support the very foundations of our civilization, which is based upon our ability to pass information and knowledge, whether technical or cultural, from one generation to the next."[39] Preservation, thus, provides access to human history and human knowledge. Librarians and archivists often highlight the essential tension between preservation and access, since, for any particular physical instantiation of a work, more of one necessarily vitiates the other.[40] A well-preserved work must have tightly restricted access; a well-accessed work becomes hard to preserve, as carelessness, oils from fingers, theft, and the like take their toll. Yet in other ways they also work in concert; there is no access without preservation, and increased access via widespread distribution

[32] O'Toole, p. 21.
[33] Some archivists have responded to the challenges of large-scale modern preservation by instead arguing more forcefully for deaccession and increased selectivity. Leonard Rapport, "No Grandfather Clause: Reappraising Accessioned Records". *American Archivist* 44 (1981), pp. 143-150.
[34] Paul Conway notes, "It has long been the responsibility of libraries and archives to assemble, organize, and protect documentation of human activity. The ethic of preservation as coordinated, conscious management, however, is a more recent phenomenon". Conway 1996. This characterizes preservation as a large-scale, organized effort grounded in resource allocation, as opposed to the technical work carried out on smaller scales by individual institutions. Here, I use preservation in a broader sense closer to that suggested by Cloonan, encompassing any work, even if uncoordinated, which seeks to maintain evidence of human activities for the long term.
[35] Cloonan 2001, p. 235. Reagan Moore has extended this line of thinking by recasting preservation as a fundamentally communicative process: "preservation can be characterized as communication with the future…[or] the validation of communication from the past." Reagan Moore 2008, p. 63.
[36] "Preserve, v.". *Oxford English Dictionary*. 3rd edition. Oxford, 2007, online.
[37] Cloonan 2015, p. 19. Hence, libraries, archives, museums, and the like are sometimes known as *heritage institutions* (or *memory institutions*).
[38] David Lowenthal, *The Past Is a Foreign Country*. Cambridge, 1985, p. 185.
[39] Marilyn Deegan and Simon Tanner, *Digital Preservation*. Facet, 2006, p. 3.
[40] The differing primary purposes of libraries and archives speak to this tension. In general, archives collect and preserve unpublished materials, with less of a focus on public access, while libraries collect published materials and concentrate on providing broad access to them.

indirectly preserves information by increasing the number of objects bearing that information that may resist destruction. Access, in important senses, *is* preservation, and intellectual property is, fundamentally, a question of control of access. Thus, intellectual property law and policy play crucial roles in the suite of social and technological processes that foster or inhibit the activity of preservation.[41]

B. Intellectual Property

Intellectual property may be generally defined as "nonphysical property which stems from, is identified as, and whose value is based upon some idea or ideas. Furthermore, there must be some additional element of novelty [i.e., creativity]."[42] The concept of intellectual property relies on a differentiation between three possible abstractions of an intellectual entity: the idea, the work, and the physical information-bearing object. William Blackstone articulated the distinction between the latter two in the seventeenth century, noting that the essence of a literary work lay not in the substance of the paper and ink, but in the 'style and sentiment' of its words. Machines, by contrast, were never exact duplicates in that same sense; even when made from the same plans, different realizations of those plans could vary significantly due to the artisan's skill.[43] Later theorists would separate the concepts and principles espoused in an intellectual entity from its specific construction as an organized intellectual work. The philosopher Johann Gottlieb Fichte theorized the distinctions in relation to books, and they are in essence duplicated, *mutatis mutandis*, in most subsequent intellectual property thinking. Fichte distinguished between the ideas, the 'form of the thoughts', and the printed paper of a written work; for Fichte, the ideas were rightfully the property of the public, the 'form of the thoughts' was the property of the creator, and the printed paper was physical property, belonging to the book's owner.[44]

The phrase 'intellectual property' includes the word *property*, and much ink has been spilled over the question of whether, and to what extent, rights and limitations in ideas and/or their expressions are properly conceived of *as property*, and how applicable the concepts of real and personal property are to the intellectual realm. For instance, there is longstanding contention, extending back to the seventeenth century, over whether copyright is best seen as right of possession of an (intellectual) object, or as a right to take certain actions in relation to that object (such as copy and distribute it).[45] Recent critics of copyright policy decisions have noted the

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[41] Michael J. Madison, "Knowledge Curation". *Notre Dame Law Review* 86 (2011), pp. 1957-1998.
[42] Justin Hughes, "The Philosophy of Intellectual Property". *Georgetown Law Review* 77 (1988), pp. 287-366, at p. 294.
[43] Adrian Johns, *Piracy*. University of Chicago Press, 2009, p. 134. The phrase "Style and Sentiment" is Blackstone's; he addresses copyright and patent both in *Tonson v. Collins* and in the *Commentaries on the Laws of England*. Mark Rose, "The Author as Proprietor: *Donaldson v. Becket* and the Genealogy of Modern Authorship". *Representations* 23 (1988), pp. 51-85, at pp. 63-65.
[44] Johann Gottlieb Fichte, "Beweis von der Unrechtmäßigkeit des Büchernachdrucks. Ein Räsonnement unde eine Fabel". *Berliner Monatsschrift* 21 (1792), pp. 443-483. I take this from Martin Kretschmer and Friedemann Kawohl, "The History and Philosophy of Copyright", in Simon Frith and Lee Marshall, eds., *Music and Copyright*. 2nd edition. Routledge, 2004, pp. 21-53, at p. 32.
[45] Rose 1988, p. 63.

rhetorical boon that the use of the word *property* provides to defenders of strong intellectual rights protections, and have decried the increasing use of 'intellectual property' (as a descriptive umbrella term) as scholarly attention to the topic has grown since the 1960s.[46] Since what is commonly referred to as intellectual property consists of a body of rights (whether state-granted or natural) to access, control, display, distribute, alter, withhold, or benefit from intellectual entities, they might alternately be described as *intellectual rights*, *intellectual protections*, *intellectual privileges* (hearkening back to the royal grants of exclusive rights in copyright's early history),[47] or even *intellectual monopolies*. While I share the healthy skepticism of intellectual propertization, I will provisionally accept the property designation, while asserting that this does not necessarily imply any set of commitments about which particular aspects of tangible property theory apply to intellectual creations.[48] I do so for two reasons. First, there is a long history, sometimes underemphasized by intellectual property critics, of referring to intellectual rights as intellectual property, industrial property, artistic property, or literary property,[49] establishing a tradition of conceptualizing copyright initially, and by reasonable extrapolation other intellectual rights, as some kind of property, the contours of which are nevertheless subject to debate. Second, I wish to avoid the implication that a bifurcation (or multifurcation) of ideals within a debate ought to be reflected in, and policed by, rhetorical factions.[50] Doing so serves to obscure the fundamental commensurability of legal and philosophical research into intellectual rights/intellectual property (the former being my preferred term, I suppose, if I were forced to choose my shibboleth).[51] *Intellectual property* is now the dominant and most recognizable term, and the purpose of the present document is not to scrutinize this linguistic consensus. In definitional terms, it makes the most pragmatic sense to ask not whether intellectual property is property, but what kind of property it is.[52]

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[46] Siva Vaidhyanathan, *Copyrights and Copywrongs: The Rise of Intellectual Property and How It Threatens Creativity*. New York University Press, 2001, pp. 11-15; Mark A. Lemley, "Romantic Authorship and the Rhetoric of Property: Book Review", *Texas Law Review* 75 (1997), pp. 873-906, at pp. 895-904. Some scholars, following George Lakoff and Mark Johnson's *Metaphors We Live By* (University of Chicago Press, 1980), extend the analysis to the framing metaphors used to explain or justify intellectual protections. See, e.g., Mark Rose, "Copyright and Its Metaphors", *UCLA Law Review* 50 (2002), pp. 1-15; William Patry, *Moral Panics and the Copyright Wars*. Oxford, 2009; Brian L. Frye, "Copyright as Charity". *Nova Law Review* 39 (2015), pp. 343-363.

[47] Tom W. Bell, *Intellectual Privilege: Copyright, Common Law, and the Common Good*. Mercatus Center, 2014.

[48] Lawrence Lessig, *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity*. Self-published, 2004, pp. 83-84.

[49] Justin Hughes, "A Short History of 'Intellectual Property' in Relation to Copyright". *Cardozo Law Review* 33 (2012), pp. 1293-1340.

[50] Similar ends are accomplished with metaphors such as 'patent trolls' and 'copyright piracy'. Patry 2009, pp. 86-96; Brian L. Frye, "IP as Metaphor". *Chapman Law Review* 18 (2015), pp. 735-758.

[51] Consequently, I will freely interchange usage of the terms *intellectual property*, *intellectual rights*, and *intellectual protections* throughout the document to point to the same fundamental referent.

[52] On this point, see also Julie E. Cohen, "What Kind of Property Is Intellectual Property?". *Houston Law Review* 52 (2014), pp. 691-708; Kenneth Einar Himma, "The Justification of Intellectual Property: Contemporary Philosophical Disputes". *Journal of the American Society for Information Science and Technology* 59 (2008), pp. 1143-1161, at pp. 1145-1146; James Boyle, *Shamans, Software, and Spleens: Law and the Construction of the Information Society*. Harvard, 1996, pp. 51-52.

There are four major legal devices providing protection of intellectual property rights: copyrights, patents, trademarks, and trade secrets. Three standard lines of reasoning have emerged to provide general philosophical justifications for intellectual property; one stems from utilitarian principles, the others from deontological normative principles. I will give an overview of each of these philosophical justifications in turn, as well as some common counterarguments, to make clear the main avenues of thought on copyright that have proven most durable and influential over the course of the past several centuries. I will then follow this with some discussion of hybrid and pragmatic approaches that blend these justifications or use them in concert with one another. This is not intended to be a comprehensive account of all possible conceptions of intellectual property, but rather a condensed illustration of its principal normative foundations.

i. Utilitarianism

One widely discussed basis for intellectual property rights argues that such rights are necessary (or nearly so) for creative production, social progress, or human flourishing. This tack is grounded in the philosophy of utilitarianism, especially as articulated by John Stuart Mill,[53] and begins with the foundational principle that the best course of action is the one that maximizes overall utility, defined as that which brings the most benefit to those who are (or could be) affected by that action. Because they deal with the implementation of generally applicable laws, utilitarian justifications for intellectual property tend to assess utility by classes of actions that are recommended on the whole, rather than through the judgment of each action individually; this approach is known as rule-utilitarianism (in contradistinction to act-utilitarianism). Property rights for physical objects are generally easy to justify on rule-utilitarian grounds as a solution to the problem of allocating scarce resources. However, intellectual goods are not like physical ones in a crucial respect: they are non-rivalrous, in that consuming or experiencing an intellectual good does not use it up, and leaves it reusable for others. The scarcity problem thus seems to disappear at first blush. Non-rivalrous goods cannot be *stolen* in the literal sense of deprivation; it is only by tortuous (and longstanding) analogy that this comes to be regarded as theft.[54] Furthermore, intellectual goods tend to be non-excludable; it is generally challenging to stop people from using or experiencing intellectual objects, because their proliferation is difficult to tightly control in the way material objects can be controlled.[55]

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[53] John Stuart Mill, *Utilitarianism*. Parker, Son, and Bourn, 1863.

[54] The theft metaphor is perhaps more defensible when couched as a denial of prospective value to the rightsholder – of profits that could have flown to the holder at purchase but did not due to infringement (and thus, at least potentially, deprived the rightsholder by proxy). The less fine-grained language of rivalrous theft is nevertheless common in lay discussions of copyright, e.g., in the Motion Picture Association of America-funded antipiracy ad "Piracy, It's a Crime", which begins, "You wouldn't steal a car, would you?". Available at < http://www.youtube.com/watch?v=h0CkJgHKEY8 >. As comedienne Mindy Kaling has quipped, "I would steal a car if, by stealing the car, the person who owned the car, they *[sic]* got to keep the car." Mindy Kaling, "Comedy Death Ray". Various Artists, *Comedy Death Ray*, Comedy Central Records, 2007. See also William W. Fisher III, *Promises to Keep: Technology, Law, and the Future of Entertainment*. Stanford, 2004, pp. 134-135. The framing of illicit duplication as *theft*, and especially of its perpetrators as *pirates*, is nearly four hundred years old. Johns, pp. 35-42.

[55] James Boyle, *The Public Domain*. Yale, 2008, pp. 2-3.

For rule-utilitarians, the combination of non-rivalrousness and non-excludability builds a strong initial case that overall social utility is maximized by allowing unfettered access to intellectual goods, since the likely benefits (in terms of education and cultural growth) are high.[56] However, it is argued, a society where no one stood to benefit personally from intellectual works is one in which few would work hard to create. For the sake of encouraging creative expression, then, property rights in intellectual goods are justified on an incentives-based, rule-utilitarian basis. On balance, the emplacement of a general rule of rights-holding results in an increase in the creation and distribution of intellectual content, and thereby benefits society as a whole even if, in some individual cases, it does not generate benefit.[57]

Historically, incentives-based, rule-utilitarian intellectual property systems have implemented weaker intellectual controls than other philosophical defenses. These systems tend to conceive of intellectual rights as limited, temporary monopolies over certain uses of intangible objects, granted by the state (rather than by God or through a claim of rights based in nature or reason) and subject to constraints that are found in general to foster well-being. An oft-quoted passage from an 1841 speech by Lord Macaulay encapsulates the line of reasoning well. Macaulay referred to copyright, specifically, as "a tax on readers for the purpose of giving a bounty to writers" due to the "necessity of giving a bounty to genius and learning." "It is good that authors should be remunerated", he continued, "and the least exceptionable way of remunerating them is by a monopoly. Yet monopoly is an evil. For the sake of the good we must submit to the evil; but the evil ought not to last a day longer than is necessary for the purpose of securing the good."[58]

It has been questioned whether property rights are the appropriate remuneration to the creators in a utilitarian-based system, rather than, say, publicly funded support[59] or rewards systems[60] (though this charge can be leveled, in essence, at all three of the standard intellectual property defenses). Taking an act-utilitarian, rather than rule-utilitarian, view of intellectual protection might suggest an alternate legal system where only certain works are granted protections necessary for social advancement.[61] Legal protections of intangible objects also

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[56] Edwin C. Hettinger, "Justifying Intellectual Property". *Philosophy and Public Affairs* 18 (1989), pp. 31-52, at pp. 34-35. See also William Landes and Richard Posner, "An Economic Analysis of Copyright Law". *Journal of Legal Studies* 18 (1989), pp. 325-363.

[57] Adam D. Moore, "Personality-Based, Rule-Utilitarian, and Lockean Justifications of Intellectual Property". In Kenneth Einar Himma and Herman T. Tavani, eds. *The Handbook of Information and Computer Ethics*. Wiley, 2008, pp. 105-130, at p. 111.

[58] Thomas Babington Macaulay, speech to the House of Commons, February 5, 1841. Quoted in Patry 2009, pp. xvi-xvii.

[59] Hettinger, p. 49.

[60] Fisher 2004, pp. 200-202. Fisher notes five possible solutions to the problem of public goods: direct government production, government subsidy, rewards systems, exclusive grants against competition (such as copyright), and encouragement of private systems of excludability.

[61] Adam Moore 2008, at p. 112, notes that the rule-utilitarian approach appears to solve a number of serious problems in the moral logic of act-utilitarian theories. Since act-utilitarianism is difficult to reconcile with rule-based systems of law, such as modern copyright and patent, it is far less common than rule-utilitarianism as a justificatory

extend to things whose creation needs no marketplace incentives to sustain, such as private letters and diaries,[62] whose protection the incentives-based rule-utilitarian case is at pains to justify on some other grounds. The chief argument against utilitarian intellectual property theory comes from within utilitarianism itself; it relies on the claim that people are less likely to create in the absence of property rights, which is, in principle, empirically verifiable (though in practice quite difficult).[63] If it could be shown that an arrangement other than property rights resulted in higher overall social utility, intellectual property systems would no longer be justifiable, according to utilitarianism's own logic. Certainly, there is widespread anecdotal belief that artists will continue to create in the absence of pecuniary reward, and some artistic schools of thought explicitly advocate for this creative worldview. Furthermore, entire wings of creative activity prosper without copyright protection, including fashion, typefaces, colloquial joke-telling, magic tricks, the culinary industry (recipes are non-protectable), and the creation of neologisms.[64] Still, many economic analyses of copyright have made compelling cases for limited statutory grants of rights for the sake of encouraging creativity,[65] and the United States Supreme Court has explicitly invoked this reasoning in some of its landmark intellectual property decisions.[66]

ii. Labor

A second theory of intellectual property foregrounds the role of labor in justifying property claims to creative individuals. It is an extension of natural rights theories of physical property, as explicated most influentially by John Locke,[67] into the intellectual realm by more or less strict analogy. Locke posited that one owns one's own body and one's capacity to do work (one's labor). Once the body expends effort upon some unowned object to refashion it, this work can create value in the object, and the resultant value rightfully belongs to the laborer, thus justifying a right of property in the object. Locke tempers the claim for physical property by asserting that the laborer must leave "enough, and as good, left in common for others", and may only claim ownership over "as much as any one can make use of…before it spoils".[68] Due to the non-rivalrous and non-excludable nature of intellectual goods, these limitations are often held to be minimally applicable to intellectual rights grants except, perhaps, in metaphorical, social

framework for intellectual property. Henceforth, I will refer to the incentives-based, rule-utilitarian justification for intellectual property simply as the utilitarian justification.

[62] Patry 2009, p. 62.

[63] Robert Merges, *Justifying Intellectual Property*. Harvard, 2011, pp. 2-3, 246-247. Alfred C. Yen has argued that it is, in fact, impossible. Alfred C. Yen, "Restoring the Natural Law: Copyright as Labor and Possession". *Ohio State Law Journal* 51 (1990), pp. 517-559, at pp. 542-543.

[64] Michael A. Carrier, "Limiting Copyright through Property". In Helena R. Howe and Jonathan Griffiths, eds., *Concepts of Property in Intellectual Property Law*. Cambridge, 2013, pp. 185-204, at p. 196. However, ad-hoc systems of protection, such as contracts and secret-keeping, sometimes proliferate in the absence of copyright control.

[65] E.g., Landes and Posner 1989.

[66] E.g., *Baker v. Selden*, 101 U.S. 99 (1879), at p. 103; *Graham v. John Deere Co.*, 383 U.S. 1 (1966), at pp. 5-6.

[67] John Locke, *Two Treatises of Government*. Awnsham Churchill, 1689, Second Treatise, chapter V.

[68] Locke, chapter V, §§ 27, 31.

senses.[69] Protection of natural rights claims for intellectual goods is more difficult than for tangible goods, and so a state-based system to enforce the claims is needed.[70]

Lockean conceptions of intellectual property may be found stretching back to Locke's own lifetime, but they saw a renaissance, especially in philosophy and legal theory, in recent decades. Several property-based natural-rights approaches have been developed that extend or modify Locke's reasoning to cover intellectual protection. The theory has been refashioned by Adam Moore, who develops the intuitively attractive idea that new ideas held in the mind, the result of intellectual effort, justify "some minimal moral claim to control" a manifestation of the idea.[71] Kenneth Einar Himma built on this conception to propose that the investment of scarce resources of time and energy in creation imbues creators with legitimate intellectual property interests.[72] Adam Mossoff extrapolated intellectual property rights from a general, integrated theory of property that takes rights to control and exclude as fundamental to all property concepts.[73] Wendy Gordon employed Lockean property theory to attempt a unified account of rights in both intellectual property and free expression.[74] Lawrence Becker explored Lockean intellectual property conceptions based in desert for labor – the notion that laborers *deserve* some reward, perhaps property, for laboring and creating valuable new ideas – rather than basing the rights claim in the sovereign ownership of laborers in their bodies and exertion.[75]

Lockean intellectual property theory has sustained several critiques. Why should labor be the benchmark for the assignation of rights, rather than some other measure of value creation? Instead, criteria such as originality, usefulness, or non-obviousness could conceivably be employed, regardless of the amount of labor, or lack thereof, expended in creation.[76] Locke's notion of labor seems to couch it as unpleasant and taxing toil, a vision at odds with many types of creative ideation. If creation is not laborious, does it deserve the same rights?[77] Once one has expended effort (mixed one's labor with the object, in Locke's original conception), why does it necessarily follow that the effort results in gain of the object, rather than merely loss of the

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[69] See Part IVB below.

[70] Richard Epstein has noted, "While metes and bounds could work for land, and simple possession for most chattels, the only way to protect copyrights is through the creation of some system that allows for them to be posted and recorded, and that takes some form of state power." Richard A. Epstein, "Liberty versus Property: Cracks in the Foundations of Copyright Law". *San Diego Law Review* 42 (2005), pp. 1-28, at p. 7.

[71] Adam Moore 2008, p. 120.

[72] Kenneth Einar Himma, "Toward a Lockean Moral Justification of Legal Protection of Intellectual Property". *San Diego Law Review* 49 (2012), pp. 1105-1182, at pp. 1155-1156.

[73] Adam Mossoff, "What Is Property? Putting the Pieces Back Together". *Arizona Law Review* 45 (2003), pp. 371-443.

[74] Wendy J. Gordon, "A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property". *Yale Law Journal* 102 (1993), pp. 1533-1609.

[75] Lawrence Becker, "Deserving to Own Intellectual Property". *Chicago-Kent Law Review* 68 (1993), pp. 609-629.

[76] Patry 2009, p. 65. This critique is mirrored in United States jurisprudence, in, e.g., *Feist Publications v. Rural Telephone Service*, 499 U.S. 340 (1991), which establishes that "sweat of the brow" alone cannot establish a copyright claim; some kernel of originality must also be present.

[77] Herman T. Tavani, "Locke, Intellectual Property Rights, and the Information Commons". *Ethics and Information Technology* 7 (2005), pp. 87-97, at p. 89.

labor?[78] For that matter, why shouldn't the labor of a second person upon one's object result in as legitimate a claim of right as the initial labor?[79] If intellectual works are social products drawn from prior sources, rather than from some unowned commons, this might justify granting property rights to everyone whose efforts played a role in their creation – or perhaps only property commensurate with the value that the laborer has added, instead of the full value of the object (however value is defined).[80] If effort merits reward, it is not clear that property rights should be that reward, rather than, say, a pat on the back or public adulation.[81] Lockean theorists typically defend the property reward through a 'no harm, no foul' argument – property rights are justified so long as no one is made worse off by their existence,[82] though an explanation of what constitutes morally-relevant worsening must be defended.[83] Lastly, since Locke's theory is based in an extension of ownership of the body, it restricts what others may do with their own bodies once property restraints have been established, and so can conflict with ideals of liberty.[84] The voluminous Lockean scholarship of recent years has sought to address many of these concerns, and in doing so has offered intellectual heft to general notions that creative work is hard work, and therefore is either entitled to legal protection or deserving of a (shot at) reward in the marketplace.

iii. Personality

Another natural-rights theory of intellectual property, refined from principles laid down most prominently by eighteenth- and nineteenth-century French and German philosophers,[85] also places high value on the connection between the work and the individual creator. Rather than focusing on the labor of the creator, though, it bases the granting of rights in the importance of developing and protecting that creator's individual personality and creativity. Immanuel Kant formulated a notion of personality rights in order to oppose then-rampant book piracy, proposing that authors possess inherent authorial rights to communicate their own personalities; acts such as plagiarism and book piracy therefore speak an author's words (or a distortion of those words)

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[78] Robert Nozick, *Anarchy, State and Utopia*. Basic Books, 1974, pp. 174-175. But see Merges, pp. 42-47, for a capable rebuttal to this somewhat sophistic contention.
[79] Pierre Joseph Proudhon, *What Is Property?*. Translated by Benjamin R. Tucker. Howard Fertig, 1966 [1840], p. 84.
[80] Hettinger, pp. 37-38; Becker, pp. 622-623.
[81] Hettinger, p. 41.
[82] Becker, p. 611.
[83] Adam Moore, "A Lockean Theory of Intellectual Property Revisited". *San Diego Law Review* 49 (2012), pp. 1069-1104, at pp. 1073-1076.
[84] Tom G. Palmer, "Are Patents and Copyrights Morally Justified?". *Harvard Journal of Law and Public Policy* 13 (1990), pp. 817-866, at pp. 827-828. This perennial intellectual property conundrum has been noted by thinkers since the eighteenth century. Boyle 1996, pp. 52-53.
[85] Precedents resembling the principles of moral rights have been noted in Russia, India, and even ancient Greece and Rome. Mira T. Sundara Rajan, *Moral Rights: Principles, Practice and New Technology*. Oxford, 2011, pp. 49-53; Thierry Joffrain, "Deriving a (Moral) Right for Creators". *Texas International Law Journal* 36 (2001), pp. 735-793, at p. 744.

without that author's consent or control.[86] Kant saw the drive to sculpt and control things outside of oneself, manifested in property rights, as indispensable to personal autonomy and freedom.[87] This was developed subsequently by Idealist philosophers such as Georg Wilhelm Friedrich Hegel,[88] Wilhelm von Humboldt, and Josef Kohler into a general theory of inherent rights extended to intangible objects. For humans to develop and express themselves as individual beings, the ability to exert creative control over intellectual creations is necessary, according to the theory. Intangible objects – that is, creative works – can then come to embody our personalities in important ways; they can reflect our character, emotions, and experiences. As Kohler argued, "Personality must be permitted to be active, that is to say, to bring its will to bear and reveal its significance to the world; for culture can thrive only if persons are able to express themselves, and are in a position to place all their inherent capacities at the command of their will."[89]

The personality-based justification is strongly tied to the philosophical traditions of nineteenth-century Romanticism,[90] which still loom large in modern-day understandings of, e.g., musical artistry[91] and filmmaking.[92] On this line of reasoning, the artist creates with specific aesthetic visions in mind, and so is rightfully entitled to significant control over how those works are presented and distributed to audiences; furthermore, the artist deserves primary place in determining the communicative intent of the work. Systems of rights grounded in personality theory do not always articulate their protections as property-based, and some theorists maintain that the rights remain valid over and above any transferred legal claims of ownership,[93] thus making them, in some senses, stronger than conventional property rights.[94] The legal heritage of personality-based intellectual property theory is the (primarily) Continental European doctrine of

[86] Palmer, at p. 839, translates relevant sections of Kant's essay "Was Ist Ein Buch?" (1797). The original is reprinted in Gustav Hartenstein, ed. *Immanuel Kant's Sammtliche Werke*. Leopold Voss, 1868, vol. VII, pp. 89-90. See also Johns, pp. 54-56.
[87] Merges, p. 17.
[88] While Hegel is often associated with personality theory, his role has been contested by Jeanne Schroeder, who alleges modern scholars are misreading Hegel. While Hegel does argue that private property is important to the makeup of individual personalities, and that intellectual property can be thought of as analogous to physical property, Hegel rejected natural rights in general and saw alienation as crucial to the functioning of legal rights of property, which conflicts with personality-based articulations of moral rights. Jeanne Schroeder, "Unnatural Rights: Hegel and Intellectual Property". *University of Miami Law Review* 60 (2006), pp. 453-503, esp. at pp. 457, 482-84.
[89] Josef Kohler, *Philosophy of Law*. Translated by Adalbert Albrecht. Boston Book Company, 1914, p. 80. Quoted in Palmer, p. 842.
[90] Sundara Rajan, p. 7; Peter Baldwin, *The Copyright Wars*. Princeton, 2014, pp. 130-132.
[91] Robert Pattison, *The Triumph of Vulgarity: Rock Music in the Mirror of Romanticism*. Oxford, 1987.
[92] Peter Decherney, *Hollywood's Copyright Wars*. Columbia, 2012, p. 110.
[93] Palmer, p. 842.
[94] Patrick Croskery, "The Intellectual Property Literature". In Vivian Weil and John W. Snapper, eds. *Owning Scientific and Technical Information: Value and Ethical Issues*. Rutgers University Press, 1989, pp. 268-282, at p. 272.

moral rights,[95] a set of inalienable, and in some cases perpetual,[96] rights guaranteeing certain authorial controls, even for works no longer under the economic (copyright) control of the author. Moral rights operate under the assumption that "harm to the work is, in fact, a form of damage to the author himself", and serve to "protect the author from suffering the moral, intellectual, or spiritual harm inflicted on him through the mistreatment of his work."[97] Authors may assert moral rights by requiring authorial credit (the right of paternity or attribution) and/or by contesting uses or alterations of their work that they find objectionable or injurious to their reputations (the right of integrity).[98]

However, the canonical defenses of personality theory weakly tie claims regarding personality to claims regarding ownership. Even assuming that one owns or controls one's personality (challenged by some social theorists as naively individualistic), it is not clear what sort of ownership must or should thereby transfer to one's creative works. For example, free use of the creative work, with proper attribution to its creator, might just as well maintain the link between author and work as would full rights of control over distribution or performance. Indeed, not all personality-based defenses of intellectual property conceive of it, fundamentally, as a *property* right at all.[99] The nature of the link between creator and creation has been challenged in other ways. Tom G. Palmer has argued that it is, in fact, severed at the moment of creation. For Palmer, the business of keeping the creation alive is attributable less to the author (who may die immediately after) and more to the audience, who would therefore rightly be invested in ownership of it.[100] Since personality theories of intellectual property trade on personality theories of physical property, ownership of creative objects can sometimes conflict with personality rights asserted in ownership of physical objects – a canonical example is a wedding ring, which has a relevance to the personhood of its wearer that is not cleanly separable from its artisan's creative efforts.[101] The theory also seems to invest significant personal claims in even rather trivial creative works, such as e-mails or juvenile drawings; to the extent that these

[95] Moral rights doctrines bifurcate into monist and dualist theories. Dualist moral rights theory, exemplified by French law, takes economic and moral rights to be essentially separable authorial interests – the author's moral interests persist regardless of his fame or prominence, or of the work's popularity (or obscurity). This allows for alienation of economic rights but not moral ones, and suggests a perpetual moral right even if economic rights expire or are waived. Monist moral rights theory, epitomized by the German approach, conceives of economic and moral rights as outgrowths of a single common principle – that of the work as the extension of an author's personality. Under the monist approach, both moral and economic rights are inalienable, though either may be subject to temporary license or waiver. Joffrain, p. 756.

[96] E.g., in France. *Code de la propriété intellectuelle* 1992, art. L. 121-1.

[97] Sundara Rajan, p. 7.

[98] These are the most common eligible assertions in moral-rights jurisdictions. Others include the right of divulgation (also called the right of disclosure or first publication), the right of withdrawal or retraction, and the right against abusive criticism. Sundara Rajan, pp. 65-67.

[99] But see Margaret Jane Radin, "Property and Personhood". *Stanford Law Review* 34 (1982), pp. 957-1015, arguing that physical property can often have strong ties to personhood in the Kantian sense; the analogies to intellectual property are simple to draw.

[100] Palmer, p. 848.

[101] Deven R. Desai, "Property, Persona, and Preservation". *Temple Law Review* 81 (2008), pp. 67-122, at p. 102. The example is derived from Radin, p. 959.

reflect one's personality and creativity, they may be better captured by theories of privacy rights, rather than intellectual property rights. Lastly, the development of complex technological tools for creation opens the question of the degree to which moral rights ought justifiably be granted to makers of the tools, rather than the creators of the works.[102] For instance, the sophisticated manipulative potential built into software like Adobe Photoshop is, in some ways, inextricable from the creative decision-making of users who design graphic art works within it. Despite these concerns, the personality-based line of reasoning remains appealing to authors and creators, particularly in its concern for the aesthetic integrity of works, as well as its vision of creativity as an essential component of human individuality.

iv. Pluralism

While these three main threads are the most prominent theoretical justifications of intellectual property, they do not exhaust the philosophical spectrum. Hybrid and pragmatic approaches to intellectual property have been developed in attempts to unify (or mollify) the three more or less mutually incompatible bases. Robert Merges proposed that once the strands of argument regarding intellectual property are unmoored from the most basic of their philosophical principles, it is possible to find striking agreement, at higher levels, about what broad concepts should be valued and how legal structures should be instituted and evaluated, even if they are sometimes difficult to implement politically.[103] That such divergent starting principles should come to broad practical agreement is indicative that they are probably all speaking, in whole or in part, to important and widely accepted understandings of the proper relations between creators, works, and society. Furthermore, most fully articulated justifications of intellectual property attempt to meld these ideas together in some form or another by combining approaches from different philosophical bases, so to speak to an unalloyed single principle sets up something of a straw man.[104] That does not make fundamental principles unimportant, but it does indicate a belief that, even if there cannot be total agreement about one particular justificatory framework, there is a pluralistic possibility of 'meeting in the middle' to achieve some measure of consensus in policy and practice.[105]

Drawing from John Rawls, Merges argues that in a philosophically pluralistic society, the landscape of deliberation typically shifts not upon foundational clashes (which are often intractable), but on a set of "shared moral commitments" which allow a civil society to settle matters via an agreed-upon setting for open debate (Rawls's 'public reason') rather than through

[102] Sundara Rajan, p. 20.
[103] Merges, p. 9.
[104] William Fisher, "Theories of Intellectual Property". In Stephen R. Munzer, ed. *New Essays in the Legal and Political Theory of Property*. Cambridge, 2001, pp. 168-199, at p. 177.
[105] Lawrence Becker makes a similar point in relation to private property rights, noting that "multiple, equally powerful lines of argument" can be employed to justify private property – for example, welfare maximization, labor claims, fairness, and liberty. Since many of these lines of reasoning converge on results, "we would not have to choose among them to resolve conflicts at the very foundations of property theory." Becker, p. 609.

enforced dogma or bloodshed.[106] Merges identifies four midlevel principles that he takes to be commonly shared values across intellectual property philosophies: efficiency, nonremoval, proportionality, and dignity.[107] These help inform his pragmatic conception of intellectual property as a set of legitimate rights whose primary function is to cultivate and support a class of artistic and creative professionals.[108] An alternate view of intellectual property drawn from a cluster of values has been articulated by Neil Netanel, whose theory, deriving implicitly from virtue-ethical conceptions of excellence, argues that intellectual property policy should be pragmatically designed to align with the goals of democratic civil governance.[109]

There is also a question of whether the four standard varieties of intellectual property are, or need be, justified using the same overarching principle or set of principles. In the same way that it is contestable whether and how intellectual property ought to be treated like tangible property, it may be asked whether copyright, patent, trademark, and trade secret reflect fundamentally different moral commitments or sociopolitical functions.[110] Trademarks and trade secrets, for instance, are harder to justify on natural-rights grounds than on market-based utilitarian ones, though they do have superficial resemblances to authorial rights of attribution and first publication, respectively. Even copyright and patent were generally justified on different bases until patent defenders began to unite both under the auspices of a general theory of creativity in the nineteenth century.[111] Not all theorists discuss the four varieties together (trade secrets, for instance, are often omitted), and some add to the list other means of control of intangible concepts, such as rights of publicity[112] and restrictions on unpublished ideas (sometimes known as the *law of ideas*).[113] It may be that moral justifications for rights in creativity, such as those invested by copyright, are best conceived as separate from justifications of protections for inventiveness, authenticity of craft, or competitive advantage. While theorists commonly discuss them collectively, decoupling them could open possibilities for pluralistic justificatory frameworks.

II. Sound Recording Copyright (part 1)

For nearly two hundred years after the signing of the Constitution, rule-utilitarian, incentives-based lines of argument generally drove the agenda of rights assignment in American

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[106] Merges, p. 10.
[107] Merges, p. 139. I will use Merges's midlevel terms as guideposts in following sections.
[108] Merges, p. 196.
[109] Neil Weinstock Netanel, "Copyright and a Democratic Civil Society". *Yale Law Journal* 106 (1996), pp. 283-387. William Fisher identifies several other theorists (including himself) who reason along similar lines, and dubs them, rather ill-fittingly, "social planning theorists". Fisher 2001, p. 173.
[110] Hettinger, p. 32.
[111] Johns, pp. 247-248, 277.
[112] Merges, pp. 96-101; William W. Fisher III, "The Growth of Intellectual Property: A History of the Ownership of Ideas in the United States". Berkman Center for Internet and Society, 1999, 25pp, at pp. 9-10. Available at < http://cyber.law.harvard.edu/people/tfisher/iphistory.pdf >.
[113] E.g., *Buchwald v. Paramount Pictures*, 13 U.S.P.Q. 2d 1497 (Cal. Sup. Ct. 1990). See Adam Moore, *Intellectual Property & Information Control*. Transaction Publishers, 2001, pp. 23-24.

intellectual property law. Alongside this, deontic approaches to intellectual rights, conceived first in essentially Lockean terms and later in personality-based frameworks, remained influential in popular and political discussion, as well as in the judicial traditions of other nations. In recent decades, natural-rights approaches have become increasingly prominent in discussions of intellectual rights, as well as in domestic judicial holdings.[114] This shift is coeval with the significant expansion of intellectual property controls on creative works that have occurred in the United States in the past half century. In the following section, I will survey the historical tension between intellectual property theory and practice through an analysis of a particular, and peculiar, example of intellectual property control in creative works: copyright in sound recordings (or 'phonorecords', as they are known in the argot of American copyright law).

Copyright is the principal intellectual property right that impinges upon the world of audio recordings, though trademarks occasionally come into play as well.[115] Since they comprise a large body of sound recordings that is of significant economic and cultural interest, and to simplify the wording of the analysis, I will focus primarily on *musical* sound recordings. However, not all audio recordings are of music, and while nonmusical (spoken-word, ambient sound, etc.) audio recordings tend to have less economic value in the modern marketplace, they are often nevertheless of significant historical or cultural value. Furthermore, the concepts I will discuss are analogously relevant to non-musical recordings as well, whether they be audiobooks, public speeches, or recordings of train whistles.

If the paradigmatic case of a copyrightable expression is a work written in words – a novel, a poem, an autobiography – audio recordings throw a spanner into the works of copyright almost immediately, because any audio recording inherently contains *two* separable copyrights: that of the recording itself, and that of the underlying work, be it song, symphony, sermon, or speech. So, for instance, anyone seeking permission to use Sinead O'Connor's 1990 hit "Nothing Compares 2 U", written by Prince, may need to consult with O'Connor's then-record label (Chrysalis, the owner of the copyright of the *recording*) as well as Prince's publisher (Warner-Chappell, owner of the *underlying work*, in this case a musical composition).[116] For the purposes of determining whether a piece of audio is copyrighted, and what rights listeners have to use it, both the recording and the underlying work must be considered. A recording may be under copyright while its underlying work is not (for instance, a modern recording of a Beethoven

[114] This view has been remarked upon copiously. Merges, p. 3; Baldwin, pp. 250, 253; Yen, p. 519; Jeremy Waldron, "From Authors to Copiers: Individual Rights and Social Values in Intellectual Property". *Chicago-Kent Law Review* 68 (1993), pp. 842-887, at pp. 849-850; Jessica Litman, *Digital Copyright*. Prometheus Books, 2001, pp. 78-81; Lyman Ray Patterson and Stanley W. Lindberg, *The Nature of Copyright: A Law of Users' Rights*. University of Georgia Press, 1991, pp. 11-12. James Boyle, however, observes a countertrend in approximately the same era. "Increasingly, scholarly discussions of information issues are turning away from liberal constitutionalism and rights theory and toward the language of microeconomics." Boyle 1996, p. 34.

[115] On the interplay between trademark and copyright in intellectual property law, see Joseph P. Liu, "The New Public Domain". *University of Illinois Law Review*, 2013, pp. 1395-1456, at pp. 1427-1440.

[116] Kembrew McLeod and Peter DiCola, *Creative License: The Law and Culture of Digital Sampling*. Duke, 2011, p. 77.

sonata), or vice versa; a sound recording may no longer be covered by copyright while the underlying composition is still copyrighted.[117] This dual nature of sound recording copyright adds a layer of complexity to policies surrounding it; any solutions to problems surrounding sound recording copyright could be scuttled by parallel problems related to copyright for the underlying works.

Since February 15, 1972,[118] any original musical recording that is fixed in some tangible medium (a wax cylinder, a reel-to-reel tape, a FLAC file, etc.) is eligible for copyright, a legal protection of creative works granted by the federal government to the work's creator. The creator need do nothing more than fix it; no longer is registration with any agency or institution required, nor any notice of intent to copyright, and so a lyric scribbled on a cocktail napkin is, instantly, as protected as a meticulously crafted studio recording.[119] If the creator first fixes an original work via a sound recording, copyright protection is afforded separately (but simultaneously) to the work and the recording; if the creator records someone else's (copyrighted) musical composition, then that creator gains copyright in the new sound recording, but the underlying work remains subject to its own preexisting copyright considerations.[120] Consider "Nothing Compares 2 U" again: once O'Connor recorded the song, she would not have been immediately free to distribute it, since Prince (or his rightsholder) still held claim on the composition's copyright.[121]

Under current law, copyright generally affords to the creator exclusive rights to make copies of a work, issue those copies to the public, to make adaptations or derivative versions of that work, and to publicly perform or display the work.[122] Sound recordings, however, do not receive the public performance and display rights (though the underlying compositions do); they are afforded a right of public performance only via digital audio transmission.[123] The creator is

[117] This is an almost purely hypothetical situation in the United States. See Part IIIA below.
[118] Sound Recording Amendment, Pub. L. 92-140, 85 Stat. 391, Oct. 15, 1971, effective February 15, 1972.
[119] This is the result of the removal of formalities through the Copyright Act of 1976 (Pub. L. 94-553, 90 Stat. 2541) and the Berne Convention Implementation Act of 1988 (Pub. L. 100-568, 102 Stat. 2853). See also Vaidhyanathan, pp. 24-25.
[120] Robert Brauneis, however, in an analysis of approaches to composition and performance, has "cast serious doubt on the assumption that there is any easy way to determine which features of a phonorecord-embodied musical work count as 'composition' and which count as 'performance'", and I share his skepticism. Robert Brauneis, "Musical Work Copyright for the Era of Digital Sound Technology: Looking Beyond Composition and Performance". George Washington Law School Public Law and Legal Theory Paper No. 2014-4, 59pp, at p. 43.
[121] As it happens, in this special case, she does not have to seek permission from the copyright holder before distributing, but rather merely pay a statutory fee, due to the mechanical license for sound recordings. This will be discussed in detail in Part VIIC. Prince was not particularly happy about this state of affairs, which partly informs the choice of example; this will also be discussed in Part VIIC.
[122] 17 U.S.C. § 106. In the European Union, many of the associated intellectual rights that fall under copyright in the United States are considered separate but related *neighboring rights*. I will discuss these all under the same heading of copyright throughout this document.
[123] Digital Performance Right in Sound Recordings Act of 1995, Pub. L. 104-39, 109 Stat. 336. The lack of a public performance right for sound recordings grows from their unique copyright history, more of which will be discussed at length below. The Sound Recording Amendment of 1971, which brought them under copyright for the first time in the United States, did not extend a public performance right to them due to disputes between, on one hand, recording artists and record labels, and on the other, broadcasters and jukebox companies. Melvin L. Halpern, "The

then at liberty to assign the copyright (that is, give or sell it away) or to license portions of the right to others for the duration of the copyright term. Since 1998 (the last time the duration of copyright was revised),[124] copyrights for musical works created by individuals last for a term of the life of the author plus 70 years. Anonymous or pseudonymous works – works for which a definite date of death for a natural person may not be possible to establish – are copyrighted for either 95 years of the date of first publication or 120 years from the date of the work's creation. Works for hire (those created by persons as part of their employment or under certain contractual agreements) also have terms of 95 years from date of publication or 120 years from date of creation.[125]

These are powerful rights, and they last for a long time. Yet they are, in the main, of recent vintage, particularly for sound recordings. The types of works that copyright covers, the bundle of rights that comprises copyright, and the specified duration of copyright have all been steadily expanded over the course of the late nineteenth and twentieth centuries.[126] This has occurred alongside heated debates about why intellectual property should exist and what it ought to accomplish. Anglo-American copyright traditions[127] trace back principally to the 1710 Statute of Anne, often held to be the first true copyright act in the world.[128] In its opening paragraph, the need for the statute was justified as follows: "Whereas printers, booksellers, and other persons have of late frequently taken the liberty of printing…writings, without the consent of the authors or proprietors…to their very great detriment, and too often to the ruin of them and their families; for preventing therefore such practices for the future, and for the encouragement of learned men to compose and write useful books".[129] This law grew out of longstanding disputes about how to regulate the book trade, which was regulated by the Stationers' Company, a self-governing guild organization asserting a monopoly over publishing rights. Rather than granting copying rights to publishers, as they had wished, the act instead gave to *authors* an exclusive, assignable right to

Sound Recording Act of 1971: An End to Piracy on the High ©'s?". *The George Washington Law Review* 40 (1972), pp. 964-994, at pp. 986-987.

[124] Sonny Bono Copyright Term Extension Act of 1998, Pub. L. 105-298, 112 Stat. 2827.

[125] 17 U.S.C. § 302.

[126] Baldwin, p. 3.

[127] While most authors treat English law as the primary immediate precedent for American intellectual rights institutions, Sean O'Connor has recently argued that the Diderot encyclopedia may also have exerted some significant impact on early American copyright and patent thinking, perhaps introducing stronger Lockean ideas of protection. Sean O'Connor, "The Overlooked French Influence on the Intellectual Property Clause". *University of Chicago Law Review* 82 (2015), pp. 733-830.

[128] Precedents may be found in royal grants of privilege and letters-patent stretching back centuries, but these served primarily to establish and perpetuate publishers' monopolies and to facilitate state censorship. The Statute of Anne is the first generalized attempt at regulating, and justifying the regulation of, open-market publication of creative works by granting rights to authors themselves. See Patterson and Lindberg, pp. 27-28; Michael W. Carroll, "The Struggle for Music Copyright". *Florida Law Review* 57 (2005), pp. 907-961, at pp. 921-923.

[129] Statute of Anne, 8 Anne c. 19 (April 10, 1710).

copy books for a once-renewable term of fourteen years, while books already under publication would retain a publisher's copyright for twenty-one years.[130]

The Statute of Anne did not initially cover music until *Bach v. Longman* (1777) held that music was 'writing', equal with books, plays, and maps, and thus eligible for protection.[131] English copyright had no force in the American colonies,[132] and by the time *Bach v. Longman* was decided, the colonies were in the midst of asserting that no English law applied to them, though in practice (as before the Revolution) American law often followed closely on the statutory and common-law traditions of Great Britain.[133] The text of the United States Constitution, drafted in 1787, grants Congress the 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".[134] Similarly, the 1790 Copyright Act, which afforded the same 14-year/14-year protection as the Statute of Anne to American authors, was titled "An Act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies".[135]

The doctrinal justifications for all three of these foundational statutes make explicit reference to what modern audiences would recognize as utilitarian principles. The Statute of Anne's defense is twofold – the first, decrying publications which "ruin [authors or proprietors] and their families", can be read to speak implicitly to Lockean principles, but the second, the "encouragement of learned men to compose and write useful books", is unambiguously incentives-based utilitarian in nature. The adoption of a limited term, and the statute's use of the word "vesting" to describe its rights grant, rather than "securing", implied that the copyright was a state-created implement rather than the enforcement of an inherent natural right.[136] This by no means settled the intellectual issue, however, and the proper justification for copyright statutes remained a contested battleground. After the protections of the Statute of Anne began lapsing in 1731, publishers began arguing that a common-law tradition protected a perpetual authorial right in creative property, transferable to (and ensured by) the publisher, and similar arguments were

[130] While the grant of copyright was made to authors, it was still expected that the rights would typically be assigned to publishers, and so the statute was still, conceptually, a device to regulate the publishing industry. The term of fourteen years was chosen because it was the length of two trade apprenticeships. Joseph S. Dubin, "Copyright Duration". *Iowa Law Review* 53 (1968), pp. 810-831, at p. 812.
[131] Ronald S. Rosen, *Music and Copyright*. Oxford, 2008, pp. 12-13. The case is *Bach v. Longman*, 98 Eng. Rep. 1274 (K.B. 1777), and the Bach in question is the composer Johann Christian Bach, J.S. Bach's son.
[132] Johns, p. 180.
[133] Lyman Ray Patterson, *Copyright in Historical Perspective*. Vanderbilt University Press, 1968, p. 180; William Lichtenwanger, "Music and Copyright Law in the United States". In David Hunter, ed. *Music Publishing and Collecting: Essays in Honor of Donald W. Krummel*. Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign, 1994, pp. 69-94.
[134] U.S. Const. Art. I, § 8.
[135] Copyright Act of 1790, 1 Stat. 124 (May 31, 1790).
[136] Johns, p. 114.

heard in early nineteenth-century America; the assertion was repudiated as a matter of law in both countries.[137]

Authorial rights and the promotion of public learning are often considered alongside each other in colonial and early republican texts; this approach was especially present in state copyright statutes passed in the wake of independence.[138] So, for instance, the preamble of the Massachusetts state copyright statute of 1783 (copied by Rhode Island and New Hampshire) reads, "security is one of the natural rights of all men, there being no property more peculiarly a man's own than that which is produced by the labour of his mind…".[139] This is certainly Lockean natural-rights language.[140] It is supplemented with the stated intent "to encourage learned and ingenious persons to write useful books for the benefit of mankind."[141] Personality-based considerations are absent; they arise from later philosophical traditions.[142] The federal enactments, however, deprioritized labor-property explanations for copyright.[143] The Constitutional commitment to "the Progress of Science and useful Arts" and the 1790 Act's directive to support "the encouragement of learning" both speak similarly to utilitarian principles as the guiding impetus for intellectual property institutions. Such principles continued to be manifest throughout most nineteenth-century jurisprudence.[144]

Copyright did not cover music at first implementation, but the principles espoused by the early copyright laws were applied to music once it was brought under the new laws' aegis, and these principles informed later copyright legislation and policy that *did* explicitly apply to musical works. While books of music were successfully copyrighted from the passage of the 1790 Act, and under state courts even prior to the Revolution,[145] copyright was not formally extended to music written in America until the passage of a new act in 1831, which also

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[137] In England, the *Millar v. Taylor* decision briefly supported common-law copyright. *Millar v. Taylor*, 4 Burr. 2303, 98 ER 201 (1769). However, it was reversed by *Donaldson v. Becket*, 2 Bro. P.C. 138, 1 Eng. Rep. 837 (1774), In America, common-law copyright was rejected in *Wheaton v. Peters*, 33 U.S. 591 (1834). See Howard B. Abrams, "The Historic Foundation of American Copyright Law: Exploding the Myth of Common Law Copyright". *Wayne Law Review* 29 (1983), pp. 1119-1191. Patterson and Lindberg, at p. 45, conclude that, to the extent that a legacy of common-law protection in copyright continued, it subsisted only in the right of first publication.
[138] Patterson, pp. 181-183; Jane C. Ginsburg, "A Tale of Two Copyrights: Literary Property in Revolutionary France and America". *Tulane Law Journal* 64 (1990), pp. 991-1031, at pp. 1000-1001.
[139] U.S. Copyright Office, *Copyright Laws of the United States of America, 1783-1962*. 1962, p. 4; see also Patterson, p. 187.
[140] William Fisher identifies some other examples of Lockean labor-desert language in early American copyright thinking, such as in the proposal drafted by the committee of the Continental Congress and in a Congressional report written in 1837 by Henry Clay. Fisher 1999, p. 13.
[141] Lichtenwanger, p. 70.
[142] Baldwin, p. 131.
[143] Patterson, p. 181; Ginsburg 1990, p. 1001.
[144] Patterson and Lindberg, pp. 59-60. I do not wish to engage in the 'mythmaking' that Adam Mossoff identifies as problematic in much copyright-minimalist scholarship, but on the whole, the legislative and jurisprudential thrust is predominantly toward utilitarian ends in eighteenth- and nineteenth-century American copyright law. Adam Mossoff, "Is Copyright Property?". *San Diego Law Review* 42 (2005), pp. 29-43, at p. 37.
[145] Lichtenwanger, pp. 69-70, 75.

extended the initial grant of copyright to 28 years (thus making the maximum term 42 years).[146] Foreign publications (including music) were not eligible for copyright registration until 1891[147] – and then only if they were printed domestically.[148] Indeed, federal copyright legislation intentionally omitted international works, so that American publishers could copy them without restraint, thereby allowing citizens to reap the benefits of European intellectual culture on the cheap.[149] By the end of the nineteenth century, sheet music was big business – demand having skyrocketed with the increasing popularity of pianos as domestic furniture – and the introduction of photolithography made reprinting of music much easier, more consistent in quality, and cheaper than it had been in previous centuries. Music publishing companies, fighting unauthorized editions and arrangements that popped up in the streets at cut-rate prices, increasingly began referring to outside reprinters as *pirates*, and agitated for copyright reform to strengthen what they saw as lax enforcement power.[150] Yet it was a different set of new technologies that resulted in the most profound changes to musical copyright in the nascent twentieth century.

While the recording of sound (in the form of a wave written on paper) now dates from 1857, with the successful recovery of Edouard-Leon Scott de Martinville's phonautograph recordings,[151] the recorded audio age begins in earnest with the invention of the phonograph by Thomas Edison in 1877, only a year after the introduction of the telephone made electrically-transmitted communication possible. Edison's early machines recorded to tinfoil at extremely poor fidelity, and the tinfoil wore out after only a few plays.[152] Workable commercial recording machines, using phonograph cylinders, were introduced in the late 1880s by Edison and by Chichester Bell and Charles Sumner Tainter. Finding a reliable means of reproducing recordings without losing fidelity proved difficult; early pantograph processes could make small numbers of identical copies, but commercial-scale copymaking via molding did not arrive until 1901.[153]

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[146] Copyright Act of 1831, 4 Stat. 436.

[147] Barry Kernfeld, *Pop Song Piracy: Disobedient Music Distribution since 1929*. Chicago, 2011, p. 19; Lichtenwanger, p. 78. Some foreign-born authors who established residence in the United States were able to pursue registration successfully. Peter Jaszi and Martha Woodmansee, "Copyright in Transition". In Carl F. Kaestle and Janice A. Radway, eds., *Print in Motion: The Expansion of Publishing and Reading in the United States, 1880-1940*. University of North Carolina Press, 2009, pp. 90-101, at p. 91.

[148] This stipulation was known as the manufacturing clause; it was partly repealed in 1964 and expired in total in 1986.

[149] Kretschmer and Kawohl, p. 30; Alex Sayf Cummings, *Democracy of Sound: Music Piracy and the Remaking of American Copyright in the Twentieth Century*. Oxford, 2013, p. 3. It has been proposed that foot-dragging in adoption of international copyright treaties, and lax enforcement of laws on the books in countries like China and India, is part of a similar modern-day strategy.

[150] Johns, pp. 327-332.

[151] Scott's phonautograph converted sound waves to scribbles on blackened paper, and was intended only as a visual record of the sound. In 2008, audio engineers were able to reverse-engineer the paper documents into audio, recovering a short snippet of someone singing "Au Clair de la Lune". Jody Rosen, "Researchers Play Tune Recorded Before Edison". *New York Times*, March 27, 2008.

[152] Andre Millard, *America on Record: A History of Recorded Sound*. 2nd edition. Cambridge, 2005, p. 27.

[153] Walter L. Welch and Leah Brodbeck Stenzel Burt, *From Tinfoil to Stereo: The Acoustic Years of the Recording Industry, 1977-1929*. University Press of Florida, 1994, pp. 72-79.

Emile Berliner began developing a flat disc to carry sounds in 1887, though it also did not become commercially viable until about a decade later.[154] Public amusement machines with eartubes for listening to prerecorded cylinders were a hit in the early 1890s, and by the end of the decade, the recording industry had begun in earnest, with talking machines for home use (and, sometimes, recording) widely advertised.[155] The two formats existed in tandem for some time, though the popularity of cylinders began to wane around the end of the decade of the 1900s.[156] In 1912, Edison introduced a flat disc to the market, and while the Edison Company continued making cylinders until 1929, they had all but died out economically by that time.[157] Flat, grooved discs – shellac or vinyl records – thus became the commercial-issue recording standard for much of the twentieth century.

Concomitantly, another mechanical means of reproducing music was introduced: the player piano. Player pianos (or pianolas) automate piano playing through the use of piano rolls – perforated paper scrolls whose holes trigger the automatic pressing of piano keys as the scrolls are unraveled. The means for programming a player piano grew out of the programmable card system developed for Jacquard looms in the textile industry, and by the 1880s, reliable methods for feeding punched, fan-folded cardboard sheets into automated instruments had been developed.[158] Edwin Scott Votey patented the pneumatic player piano mechanism in 1897, which allowed for smooth, thin sheets of punctured paper to be rolled up and inserted into the instrument.[159] A new industry was born. Pianolas came into wide use shortly after the year 1900, and in the subsequent quarter-century they became an almost ubiquitous facet of musical entertainment; from 1900 to 1930, about 2.5 million of them were sold.[160] The player piano fought a losing battle in the marketplace with records and radio in the 1920s and 1930s, and eventually became a casualty of the Great Depression, steeply dropping off in popularity during that era.[161] Though it is now thought of as a rather quaint curiosity, its impact on American copyright was profound.

The development of sound recording put a new wrinkle into the concept of the musical work. Some early commenters noted that sound recordings fixed not merely a work, but also the interpretation of that work through the individual performance. An orator or preacher's lecture, put to wax, captured the "personality and all the characteristics of speech of the man uttering it".[162] The unique tone and timbre of musical performers could be fixed in this way as well, independent of the markings of a musical score. The same could be said of piano rolls, which were punched in real time by professional pianists, accurately capturing and allowing for the

[154] Welch and Burt, pp. 96-102.
[155] Millard, pp. 42-57.
[156] Welch and Burt, pp. 137-138.
[157] Welch and Burt, p. 126.
[158] Arthur W.J.G. Ord-Hume, *Pianola: The History of the Self-Playing Piano*. George Allen & Unwin, 1984, p. 22.
[159] Ord-Hume, pp. 24-26.
[160] Ord-Hume, p. 28.
[161] Ord-Hume, pp. 40, 120-122.
[162] Cummings 2013, p. 24.

reproduction (and editing) of their eccentricities of tempo and phrasing.[163] Should this creative effort be recognized with its own protection? At the time, the question was largely overlooked. Most talking machine companies spent little time attempting to defend copyright claims in sound recording, preferring to fight patent battles over the recording technology instead.[164] Nevertheless, debates over copyright were frequent in turn-of-the-twentieth-century America, and arguments couching copyright as statutory privilege or as natural right were both advanced.[165] Some observers advocated for the adoption of the European standard for all copyrights: a term lasting for the life of the author plus 50 years, modeled after the Berne Convention of 1886.[166] Instead, the Copyright Act of 1909 eschewed this in favor of an extended statutory term – twenty-eight years, once renewable.[167]

Sound recordings and piano rolls, however, were not afforded copyright under the 1909 act. These were only two of numerous new technologies arising in the late nineteenth century that seemed to challenge traditional notions of what copyright did or should cover – motion pictures, the mimeograph, and radio posed parallel problems soon after. Both Congress and the courts wrestled with the problems of interpreting old statutory language in light of new technological possibilities, and of the suitability of new grants of copyright.[168] Since the Constitution explicitly speaks of 'writings', and it was unclear to Congress whether a sound recording qualified as a 'writing', there were concerns that the extension of copyright to recordings might be unconstitutional.[169] Instead, in a move intended to foil monopolies over distribution of songs via piano roll,[170] the compulsory mechanical license was created for mechanical reproductions of songs, covering both sound recordings and piano rolls. Under the terms of this license, once a musical work is distributed publicly in the form of an authorized recording, anyone can record and distribute a new, original recording (i.e., a cover version) of the underlying work, without needing to seek permission from the author or rightsholder, so long as a flat fee per copy is paid.[171] The composer of a song, then, had the right to choose the means of the first public recording, but after this, for a small fee, it was anyone's to play.

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[163] Ord-Hume, pp. 34-35.
[164] A notable exception to this was Victor. Cummings 2013, pp. 13-14.
[165] Patterson and Lindberg, at p. 119, note that some courts began incorporating personality-based language into decisions from the late nineteenth century.
[166] Pamela Samuelson, "Notice Failures Arising from Copyright Duration Rules". *Boston University Law Review* 96 (2016), pp. 667-690, at p. 675.
[167] Copyright Act of 1909, Pub. L. 60-349, 35 Stat. 1075.
[168] Litman 2001, pp. 47-48.
[169] Peter Jaszi, *Protection for Pre-1972 Sound Recordings under State Law and Its Impact on Use by Nonprofit Institutions: A 10-State Analysis*. Council on Library and Information Resources, 2009, p. 3. This contention had previously been settled for photography in *Burrow-Giles v. Sarony*, 111 U.S. 53 (1884), which held that photographs were 'writings' in the sense meant by the Constitution, and so upheld the 1865 law extending them copyright.
[170] The license was created in direct response to the Aeolian piano roll company's signing of exclusive contracts with 87 different music publishers to release their music via piano roll for a period of 35 years. This represented approximately 43% of the total music publishing market. Russell Sanjek, *American Popular Music and Its Business: The First Four Hundred Years*. Oxford, 1988, vol. 3, pp. 22-23.
[171] 17 U.S.C. § 115.

The compulsory mechanical license constitutes a major limitation on the control of the artist over the promulgation of a creative work. Essentially, American copyright law treats sound recordings conceptually as a special instance of a public performance;[172] the user pays a set fee in exchange for a license to perform (and, thereby, fix and sell copies of) the recording. The license stands in direct contradiction to personality-based theories of intellectual property. If the creative work is indissolubly tied to the expressive capabilities of the artist, by what rationale could it be justified to bequeath the right to make new recordings of that work to others, willy-nilly, at a price determined by the state?[173] Lockean theorists, too, might bristle at such an abridgment of an author's natural rights to control the work – though these rights could be justified as a legitimate concession to the state in exchange for enforcement guarantees, as well as the recompense of the statutory rate.[174] The mechanical license for sound recordings, in keeping with the by-then longstanding utilitarian tendency of American copyright, was conceptualized as a curbing of the monopolistic privileges of the exclusive right to copy, for the sake of encouraging economic and cultural development.

New facets of musical copyright also came into play around the turn of the twentieth century. These included the right of public performance, which began covering musical dramatic works (such as operas, cantatas, and musical comedies) in 1897,[175] and the right of broadcast, which was extended from the licensing provisions of the 1909 Copyright Act in the 1920s.[176] Because public performance rights were cumbersome to administer in practice (a radio station owner, for instance, would find it virtually impossible to contact each copyright owner to request permission and pay fees for each song broadcasted), large nongovernmental clearinghouses for rights processing, such as ASCAP and BMI, came into being in response to these new needs. Broadcasters could buy a 'blanket license' from the agencies for the right to play any song in the agencies' registries.[177] This collective licensing arrangement indirectly diluted the link between

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[172] As opposed to a derivative work, which 17 U.S.C. § 115 nominally prohibits by stipulating, "the arrangement [for the recording] shall not change the basic melody or fundamental character of the work", though this is essentially ignored in practice.

[173] The 1909 Copyright Act specified two cents per physical copy made; the current mechanical royalty rate is 9.1 cents per copy or 1.75 cents per minute of playing time, whichever is greater. United States Copyright Office, "Mechanical License Royalty Rates". Available at < http://www.copyright.gov/licensing/m200a.pdf >.

[174] Moore 2012, pp, 1089-1090.

[175] This was an extension of an 1856 law granting public performance rights to written works, itself expanded in 1870 to include categories now recognizable as derivative works (adaptations and translations). Kernfeld, p. 19; Kevin Goldman, "Limited Times: Rethinking the Bounds of Copyright Protection". *University of Pennsylvania Law Review* 154 (2006), pp. 705-740, at p. 710. Sound recordings, to this day, are not afforded a public performance right in the United States, due in part to the longstanding claim that radio play (in particular) acts to the promotional benefit of recording artists. However, the Digital Performance Right in Sound Recordings Act of 1995 (Pub. L. 104-39, 109 Stat. 336) affords a right of public performance and broadcast to digital transmissions of (post-February 15, 1972) sound recordings; these are managed through SoundExchange, an ASCAP-like clearinghouse.

[176] Kernfeld, pp. 21-23; Graeme Austin, "Radio: Early Battles over the Public Performance Right". In Brad Sherman and Leanne Wiseman, eds. *Copyright and the Challenge of the New*. Wolters Kluwer, 2012, pp. 115-140.

[177] M. William Krasilovsky and Sydney Shemel, *This Business of Music*. 10th edition. Billboard Books, 2007, p. 145. ASCAP also enforces public performance fees for restaurants, businesses, and other organizations. Lydia Pallas Loren, "Untangling the Web of Music Copyrights". *Case Western Reserve Law Review* 53 (2003), pp. 673-722, at pp. 684-685.

creators and their works even further, a disjuncture that was compounded by the tendency of record labels and music publishers to have copyright of works assigned to them as part of their contracts with creators. Law and policy thereby mutually created practice which undermined personality-based notions of the artist and reinforced utilitarian (or, perhaps, pragmatically Lockean) intellectual property concepts.

Despite the dramatic growth of the recording industry in the twentieth century, and despite repeated legislative attempts to extend full copyright protection to audio,[178] sound recordings remained outside the purview of copyright until legal overhauls were enacted in the 1970s. Prior to this, legal battles over the copying of recordings were, of necessity, limited to charges of unfair competition and of common-law copyright infringement of unpublished works at the state level.[179] Due to highly publicized instances of large-scale music piracy in the 1960s and early 1970s, and increased calls from the record industry for legislative action, states began passing their own copyright and antipiracy initiatives.[180] Some of these statutes made no mention of temporal limitations and thus extended into perpetuity, and there was no attempt to harmonize laws between states, resulting in a regulatory crazy quilt. Antipiracy statutes existed in all states but one by 1979,[181] and state protections were buttressed by the Supreme Court decision in *Goldstein v. California* (1973), which affirmed their constitutionality and held that they were not preempted by the federal lack of coverage.[182] The Sound Recording Amendment of 1971 (effective February 15, 1972) and the Copyright Act of 1976 (effective January 1, 1978) thoroughly changed sound recording copyright policy at the federal level. The former extended copyright to new sound recordings, affording them the renewable 28-year copyright term available since 1909. The latter eliminated registration requirements and moved away from a fixed-year model of copyright to one based on the author's lifetime for many works. The 1976 Act established terms of life of the author plus 50 years for works by natural persons, and 75 years from publication or 100 years from creation for anonymous works, pseudonymous works, and works for hire. The Copyright Term Extension Act (CTEA) of 1998 subsequently lengthened all of these terms a further twenty years.

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[178] Bills to grant copyright to sound recordings were introduced into Congress 29 times between 1906 and 1951, but all foundered on disputes between stakeholders. Halpern, p. 976.

[179] Until the Copyright Act of 1976 went into effect, unpublished works were considered eligible for a perpetual common-law copyright until the point of publication. Scott M. Martin, "The Mythology of the Public Domain: Exploring the Myths behind Attacks on the Duration of Copyright Protection". *Loyola of Los Angeles Law Review* 36 (2002), pp. 253-322, at p. 263. Sound recordings, somewhat illogically, were considered by some state courts as a publication of the *composition* but not of the *recording* itself – thus making all sound recordings a class of unpublished works *qua* recordings. Halpern, pp. 969-970. Sound recordings released prior to the effective date of the Sound Recording Act of 1971 (that is, February 15, 1972) are still afforded state common-law copyright (in addition to any other state protections). Jaszi 2009, pp. 4-5.

[180] Register of Copyrights, *Federal Copyright Protection for Pre-1972 Sound Recordings*. United States Copyright Office, 2011, pp. 10-11.

[181] Sidney A. Diamond, "Sound Recordings and Phonorecords: History and Current Law". *University of Illinois Law Forum* (1979), pp. 337-372.

[182] 412 U.S. 546 (1973). See also Jaszi 2009, p. 8.

In doing so, the United States moved closer to the European model of copyright protection, and away from a copyright scheme driven by utilitarian considerations. Continental copyright, based in the personality doctrine, offers much stronger protections to authors, and for much longer time periods, than American copyright had previously bestowed.[183] France was a leader in developing this alternate theory of copyright, which came to be associated closely with the idea of moral rights. French publishing in the late eighteenth century was regulated by crown privileges that facilitated censorship; these could be granted to authors in perpetuity, but were more often granted to publishers for the life of the author.[184] As in England, publishers often pushed for natural rights in literary property on behalf of authors.[185] Soon after the outbreak of the French Revolution, authors and philosophers, hoping to dismantle the royal privilege system, began arguing for a natural-law conception of copyright based in authorial rights, albeit one with significant limitations for the sake of the public good.[186] Life-plus-x models of intellectual property duration date back at least to the acts following the Revolution. The first appears to have come on January 19, 1791, affording dramatic works a protection of life of the author plus five years; it was followed by a blanket life-plus-ten-years term for creative works, passed on July 19, 1793.[187] In some ways, however, the French system, and French copyright rhetoric, resembled Anglo-American efforts to protect creative rights through the first few decades of the nineteenth century.[188]

Over the course of the later nineteenth century, however, European theorists moved gradually away from thinking of authorial rights as an embodiment of property rights analogous to physical goods; correspondingly, the personality doctrines of Kant and Hegel, applied to intangible creative works, increasingly served as the basis for copyright philosophy and law in France and neighboring states.[189] Subsequent European copyright implementations gradually increased the length of the postmortem grant. Authors themselves played major roles in extending the scope and duration of copyright throughout Europe, and were far more successful than copyright-maximalist writers like Noah Webster and Mark Twain were in America. Victor Hugo, in particular, was active in marshaling authors and policymakers to develop general guidelines for the protection of authors' rights both within and across national borders.[190] The culmination of these efforts was the Berne Convention of 1886, which established minimum

[183] Baldwin, p. 244; Neil Netanel, "Alienability Restrictions and the Enhancement of Author Autonomy in United States and Continental Copyright Law". *Cardozo Arts & Entertainment Law Journal* 12 (1994), pp. 1-78, at pp. 7-9.
[184] Ginsburg 1990, p. 997.
[185] Ginsburg 1990, pp. 997, 1012.
[186] Netanel 1994, pp. 14-15; Ginsburg 1990, pp. 1006, 1009.
[187] Kretschmer and Kawohl, p. 34. Ginsburg 1990, at p. 1006, notes that this statute was not driven by authorial-rights considerations, but by opening works up to the public; in fact, the life-plus-five term actually limited the perpetual monopoly of the French state theater on classic Francophone plays. By 1793, authorial rights had returned to the foreground, and were theorized as being fully compatible with the interests of the public. Ginsburg 1990, p. 1009.
[188] Ginsburg 1990, pp. 994-995.
[189] Netanel 1994, pp. 15-16.
[190] Kretschmer and Kawohl, p. 40.

copyright protection standards for international adoption; in 1908, a second conference in Berlin revised and expanded these protections, which by then stipulated a minimum term of coverage of life of the author plus fifty years for all signatories.

The United States did not become a signatory to the Berne Convention until 1989, but the trade benefits of hewing to it loomed large in the decision to extend copyright duration so significantly in 1976. In addition to the term extension, the 1976 Copyright Act also initiated the dismantling of the requirements of publication and registration, which were soon after eliminated entirely to comply with the United States' entry into Berne. For a copyright to be valid under the 1909 Act, works had to be registered with the Copyright Office or published with a notice of copyright. The removal of these requirements undermines the utilitarian view of copyright as a purely statutory grant; in the words of Alex Sayf Cummings, it "suggests that copyright is an inherent quality of an expression, something that the author and his heirs can exploit for the rest of his life and well beyond, just by the act of creation."[191] Other aspects of the 1976 Act also strengthened some authorial rights, especially vis-à-vis distributors and publishers. The new provisions affording termination of transfer rights and the elimination of renewal formalities were intended to result in greater authorial control over dissemination of works, which, in theory, would allow them to challenge the strong legal position of rightsholding publishers and distributors. Yet major rightsholders nevertheless managed to keep the legal balance of copyright in their favor in the realms of scope and duration (if perhaps less so in terms of enforcement), while the relative legal rights of the public, in the form of consumers and downstream users, saw little attention.[192]

While legal scholarship increasingly brought natural-law copyright ideas to the forefront,[193] the degree to which the new copyright system diverged from previous legal bases seems to have been only dimly considered by policymakers involved with the 1976 and 1998 Acts. It may be that Congress didn't really consider legal philosophy at all;[194] some observers, including Jessica Litman, have described the process of transforming copyright as primarily a protracted negotiation between rightsholders and institutions lobbying on behalf of their vested interests, hammering out bargains they can all live with and submitting them as the substantive provisions of reform bills.[195] Litman notes that the public does not have interest groups advocating on its behalf in these proceedings, other than perhaps libraries (which are rarely able to carve out exemptions for anything beyond libraries themselves) and members of Congress

[191] Cummings 2013, p. 146.
[192] Loren 2003, p. 675.
[193] Merges, p. 3.
[194] Patterson and Lindberg, at pp. 91-92, note that none of the 34 studies conducted by the Copyright Office in preparation for the drafting of the 1976 act dealt with the history or philosophy of copyright (though one did examine moral rights in law).
[195] Litman 2001, pp. 22-69. See also Rufus Pollock, "Forever Minus a Day? Some Theory and Empirics of Optimal Copyright". *Society for Economic Research on Copyright Issues*, 2007, p. 17. Available at < https://rufuspollock.com/papers/optimal_copyright_term.pdf >.

(who played a minimal role in active deliberation).[196] Thus, lobbying groups, representing established authors (vicariously) and publishers and distributors (directly), tend to gain the most from them. From this analysis, Litman claims, inferring congressional intent in enacting legislation is difficult, as it is virtually impossible to separate from the (sometimes-contradictory) self-interests of the industry representatives who drafted its provisions.[197] Nevertheless, there is value in pursuing statutory interpretation here, for two reasons. First, self-interested lobbying is not necessarily unprincipled lobbying – certainly, not for that reason alone – and adopting the recommendations of lobbyists may indicate a corresponding acceptance of the principles those lobbyists seek to defend. Second, legislative intent is not completely opaque; bills are often prefaced with explanatory framing, and committee discussion and floor debate often evinces motivation.

The principal justifications for duration extensions in the Copyright Act of 1976, at least as explicitly articulated, bear little resemblance to talk of protection of creators' personalities.[198] Many of them would recur in deliberations over the Sonny Bono Act in the late 1990s. The House report on the 1976 Act notes, "authors and their representatives stressed that the adoption of a life-plus-50 term was by far their most important legislative goal in copyright law revision. The Register of Copyrights now regards a life-plus-50 term as the foundation of the entire bill."[199] However, the discussion of duration does not reference foundational philosophical concerns (though they crop up sparsely in other portions of the document, e.g., in the rejection of a compulsory license for the public performance of nondramatic literary works.)[200] Part of the impetus behind the extensions was a desire to harmonize intellectual property laws internationally, so as to guarantee mutual protections for trade.[201] At that time, most other nations had adopted life-plus-x models and so had longer terms than the United States.[202] It was also suggested that the lifespan of the average person was a benchmark for the fixed-length term in the 1909 Act, and that life expectancy increases necessitated longer terms to ensure that fair economic benefits accrued to authors.[203] Technological developments, which had served to extend the commercial life of recordings, were given as an additional reason to extend copyright; the fact that an increasing number of works might not see commercial or artistic recognition until decades after creation, it was thought, merited copyright extension, so that creators might reap

[196] Litman 2001, pp. 52, 74.
[197] Litman 2001, p. 53.
[198] Edward J. Damich, "The Right of Personality: A Common-Law Basis for the Protection of the Moral Rights of Authors". *Georgia Law Review* 23 (1988), pp. 1-96, at p. 52.
[199] H.R. Rep. No. 1476, 94th Cong., 2d Sess. (1976), p. 133.
[200] H.R. Rep. No. 1476, p. 119.
[201] This was also one of the major motivations behind the passage of the Sound Recording Amendment of 197. In October 1971, the United States signed an international treaty on sound recording protections, which obligated it to pass legislation in order to ensure reciprocal protection from the other signatories. Halpern, p. 978.
[202] H.R. Rep. No. 1476, pp. 135-136.
[203] H.R. Rep. No. 1476, pp. 134-135. This suggestion was earlier made by Abraham Kaminstein, Register of Copyrights, in reports issued in 1961 and 1965. See Samuelson 2016, pp. 671-677.

these delayed rewards.[204] Beyond this, the streamlining effect of reducing registration formalities and having all of a creator's works pass at a single time was championed, as the then-current system of determining a work's copyright status through registration dates was thought to be burdensome.[205] None of these justifications point to Kantian or Hegelian underpinnings for protecting the personality of the artist, and it is a thoroughly American irony that the nation should come to adopt an outwardly personality-based copyright regime for steadfastly pragmatic reasons.[206]

Yet even if the bill had been passed with the express intent of protecting personality rights in creative works, the copyright extensions enacted in the United States have done little in practice to protect many individual artists' rights *as personality rights*, for two reasons. First, moral rights provisions of the sort Berne requires in its Article 6*bis* were not adopted in the 1976 act or subsequently. Legislation comporting with entry into Berne had been introduced many times before 1989 without success, and much of the opposition came from the entertainment industries,[207] who objected to the implementation of an inalienable authorial right of integrity, even as they desired longer terms for economic rights.[208] Such a provision could have stripped them of the ability to edit and modify releases for performance, distribution, and broadcast as they saw fit. When formalities were dropped by the Berne Convention Implementation Act of 1988, further moral rights provisions were not provided. The only explicit legislative action on moral rights was enacted for a limited class of unique or very-limited-edition visual works the following year.[209] Patterson and Lindberg note, "Congress, perhaps yielding to very strong opposition from publishing and broadcasting lobbies, was either unable or unwilling to include a moral-rights provision in the amendatory legislation [the Berne implementation act]. After an unsuccessful effort to do so, the lawmakers simply announced that the United States already recognizes the author's moral rights and that no change was needed."[210] Free-expression concerns limit the implementation of moral rights in the United States, since the rights against distortion/mutilation and excessive criticism fundamentally conflict with First Amendment commitments to freedom of expression.[211]

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[204] H.R. Rep. No. 1476, p. 134.
[205] H.R. Rep. No. 1476, p. 134.
[206] Yet this is not necessarily an example of the United States acting out of the national character. Peter Baldwin notes, "Differences between [Anglo-American] copyright and authors' rights are clear at a general and philosophical level. But in the hurly-burly of implementation and administration, they are frequently obscured by everyday practical considerations. Outcomes are often dictated by functional necessity, not philosophical disagreement." Baldwin, p. 22.
[207] Martin A. Roeder, "The Doctrine of Moral Right: A Study in the Law of Artists, Authors and Creators". *Harvard Law Review* 53 (1940), pp. 554-578, at pp. 557-558.
[208] Baldwin, p. 241.
[209] Visual Artists Rights Act of 1990 (17 U.S.C. § 106A). See Netanel 1994, p. 8. At least thirteen states also have supplementary moral-rights protections for visual artists. Baldwin, pp. 235-236.
[210] Patterson and Lindberg, p. 167.
[211] Roberta Rosenthal Kwall, "Copyright and the Moral Right: Is an American Marriage Possible?". *Vanderbilt Law Review* 38 (1985), pp. 1-100, at pp. 65-68.

Second, the bill could do little to change the fact that few artists under contract own the copyrights to their creations.[212] In the record industry, for instance, most record contracts stipulate that copyright in the sound recording passes to the label as a work for hire.[213] Artists whose works are assigned to the labels via independent contract, rather than made as works for hire, have some reprieve in the procedures for termination of transfer, implemented with the 1976 Act. This is available to creators who wish to make assertions of artistic control, but can be exercised no earlier than the thirty-fifth year after initial assignation.[214] The primary reasons to terminate are likely to be more favorable economic prospects (for continuing moneymakers or newly lucrative works),[215] and since most works have little remaining economic value 35 years after publication,[216] termination of transfer may end up being purely a matter of authorial principle for many once and (possibly) future rightsholders. Due to the cost and uncertainty of transfer litigation, the likely outcome is that many artists will either renegotiate terms or choose not to terminate, leaving the copyright in the control of record companies.[217] The long-term results of termination of transfer are still playing out. Successfully terminating a prior transfer is yet another difficult legal maneuver for artists, one that has not been widely exercised.[218] However, still-successful artists are exercising termination rights; notices of termination of transfer have been filed by formerly top-selling artists such as Tom Petty, Bob Dylan, Bryan Adams, Kris Kristofferson, and Charlie Daniels.[219] A 1999 act explicitly made sound recordings works for hire, though it was repealed in 2000.[220] Nevertheless, labels have long argued that most sound recording contracts are properly considered so legally.[221] Works for hire, unlike assignations, are not subject to termination of transfer; their copyright inheres with the employer

[212] In this, the United States differs from e.g. France, whose copyright and entertainment-taxation laws are specifically architected to benefit authors rather than record labels and corporate publishers. Hugh Dauncey and Philippe Le Guern, "France", in Lee Marshall, ed., *The International Recording Industries*. Routledge, 2013, p. 143. See also Patterson and Lindberg, p. 239.

[213] Krasilovsky and Shemel, p. 64; Loren 2003, p. 686. If sound recordings are handled along the precedent of *Community for Creative Non-Violence v. Reid*, 490 U.S. 730 (1989), there are strong arguments that, notwithstanding the explicit terms of most record label contracts, sound recordings do not meet the legal definition of work for hire. The situation awaits a landmark decision. William Henslee & Elizabeth Henslee, "You Don't Own Me: Why Work For Hire Should Not Be Applied to Sound Recordings". *The John Marshall Review of Intellectual Property* 10 (2011), pp. 695-714, at pp. 701, 708-712.

[214] 17 U.S.C. § 203. See also Krasilovsky and Shemel, pp. 116-120.

[215] In this, the termination of transfer grant substitutes for the copyright registration renewal available to pre-1978 creators. Rights reverted to the creators at the time of renewal, allowing them to renegotiate contracts for the second term of copyright. Eric P. Early, "It's a Wonderful Life – Motion Picture Studios Can Regain Control of Their Wayward Classics". *UCLA Entertainment Law Review* 1 (1994), pp. 139-167, at p. 140.

[216] William R. Landes and Richard A. Posner, "Indefinitely Renewable Copyright". *University of Chicago Law Review* 70 (2003), pp. 471-518, at p. 500.

[217] Lydia Pallas Loren, "Renegotiating the Copyright Deal in the Shadow of the Inalienable Right to Terminate Copyright". *Florida Law Review* 62 (2010), pp. 1329-1371, at pp. 1352-53.

[218] Cory Doctorow, "New Tool Helps Authors Claim Their Copyrights Back from Publishers (Even 'Perpetual Assignments'). *Boing Boing*, October 15, 2017. Available at < https://boingboing.net/2017/10/15/17usc304c.html >.

[219] Larry Rohter, "Record Industry Braces for Artists' Battles over Song Rights". *New York Times*, August 15, 2011.

[220] Intellectual Property and Communications Omnibus Reform Act of 1999, Pub. L. 106-113, 113 Stat. 1501; Work Made for Hire and Copyright Corrections Act of 2000, Pub. L. 106-379, 114 Stat. 1444. See Henslee and Henslee, pp. 700-703.

[221] Rohter. The legal definition of a work made for hire is codified in 17 U.S.C. § 101.

– the record company – for the duration of copyright. In fact, major labels attempted to convince Congress (in hearings leading up to the Sound Recording Act of 1972) that they should be assigned copyright in sound recordings by default, arguing that they create much of the value of a recording, and so act legitimately as a sort of author in themselves.[222]

This last argument is, in a way, Lockean; it's a claim of rights based in the labor of the company, which arranges for production, provides the recording studio and pays for it as physical plant, markets the ensuing album or single, and so forth.[223] From a utilitarian standpoint, the practice of work-for-hire recordings is easily defensible for the sake of 'greasing the wheels of commerce' and streamlining the copyright assignment process. But for other philosophical viewpoints, the case of recordings pointedly highlights difficulties in determining who counts as a creator, and how much, in cases of jointly-made creations. The Kantian and Lockean models for intellectual property generally assume a single creative individual, which may have been a reasonable presumption in the seventeenth and eighteenth centuries, but many works today are made collaboratively or under contract with input and review from large numbers of people. Studio films and video games, for example, routinely require the mutual involvement of hundreds or thousands of creative people in order to bring a work to market.[224] Even a simple sound recording of, say, an orchestral pop song has many claimants to some portion of the creative expression – the lyricist(s), the producer(s), the arranger(s), each musician who plays (perhaps numbering dozens of people), the recording engineer(s), backup singers, overdubs from session musicians, and so on. Lockean theorists can potentially explain this away through a contract model without much difficulty, but personality-based theories seem to have inherently poor theoretical tools for handling such works. Applying the individualist framework may, in practice, grant vast and very long rights to persons and institutions who may have minimal participation in the circumstances of their creation, if at all. As a result, policies comporting with authorial rights ideals can backfire in their mission to grant creators more control over their works.

The clash of Merges's midlevel principles – efficiency, nonremoval, proportionality, and dignity – is evident here. There is a desire to provide artists with control over, and/or compensation for, use of their works; at heart, this is an issue of dignity. Multi-artist collaborations make this difficult, so a simple assignation to labels is proposed, as a matter of efficiency. Yet this seems nevertheless to have the effect of stripping dignity from creators, and its practical result contravenes the proportionality principle. The debate here runs aground on conflicting foundational principles, but here, agreement founders even at midlevel. Merges is

[222] Cummings 2013, p. 134.
[223] The labels hoped to follow in the footsteps of Hollywood studios, who successfully had copyright in films accorded to them as works for hire for all parties involved.
[224] This is a problem in patent allocation as well; many useful modern devices or processes are engineered by teams of dozens or hundreds. "The image of the lone author working in her garret is almost wholly obsolete. Today most writing (indeed, most creativity of all sorts) is collaborative….Yet American lawmakers cling stubbornly to the romantic vision." Fisher 1999, pp. 16-17.

careful to qualify his hopes for midlevel consensus for the purposes of determining intellectual property policies:

> For some…the upshot is clear: we must stop pretending to argue on instrumental grounds, in favor of a more straightforward debate along explicitly ethical lines. I think this proposal is overly optimistic regarding the chances for agreement in such debates. With Rawls, I am willing to concede that ultimate ethical commitments may be so divergent that they obviate all likely grounds of agreement. The best we can hope for in such a situation is a shared normative language, which can be used to conduct debate on a nonfoundational level. Again, midlevel principles serve just this purpose.[225]

In some ways, the modern copyright system in the United States seems poised to fulfill the dream of the booksellers of the Stationers' Company, some three hundred years down the line: a strong and state-secured exclusive right held by content publishers, rather than creators, and extending in perpetuity, or close to it. I will turn now to some of the effects of the recent move toward personality-based theories – or, perhaps more accurately, the ill-executed pragmatism that has resulted in a copyright chimera partially, and clumsily, implementing personality-based ideals – on sound recordings. In particular, I will argue that the example of sound recording preservation surfaces serious problems both for current copyright law and for intellectual theories that would champion strong copyright protection.

III. Sound Recording Copyright (part 2)

The principal lesson arising from the previous Part is that American copyright law is philosophically incoherent. It has become unmoored from the primary stated aims of its initial charter and taken on many characteristics of European-style copyright, which has completely different animating principles.[226] However, this is not due to an overt desire to adopt those principles; American copyright extensions and expansions have been, in the main, pragmatic in justification.[227] Along the way, many of the goals of copyright itself have been undercut by the potpourri that is the law's current manifestation.[228] There is perhaps no more fitting example of this tendency than recorded sound. Sound recording copyright policy, in several respects, serves as a limiting case of copyright protection, and in what follows I will argue that its lessons in

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[225] Merges, p. 145.

[226] Lest this argument fall prey to the genetic fallacy, it should be noted that such movement is not necessarily a bad thing, in and of itself; times change, institutions reconsider their purposes, and, sometimes, progress comes from this process. What I seek to highlight here, however, is that the times appear to have changed without there being an overt and principled effort to do so, and with insufficient contemplation of the adverse repercussions of that movement.

[227] Ultimately, this is nothing new, nor is it a uniquely American problem; nineteenth-century jurist Robert Collier remarked on the inconsistency of British patent and copyright law, as well. Johns, pp. 287-288.

[228] William Patry has voiced similar sentiments: "No one should suggest that our copyright laws are rational, deliberate, unified policy instruments, carefully designed to achieve specific social and economic objectives. Instead, our copyright laws are a hapless mixture of individual provisions, worked out as political compromises among powerful special interests, taking place over large periods of time, with no continuity among policymakers, and without any effort at determining whether the parts fit into a sensible whole." William Patry, *How to Fix Copyright*. Oxford, 2011, p. 6. See also Zohar Efroni, *Access-Right: The Future of Digital Copyright Law*. Oxford, 2011, p. xxiv.

practice redound upon the structures of intellectual property theory in general – especially with respect to the survival, maintenance, and preservation of creative works.

I will use the example of recorded sound to address four topics that highlight strain between intellectual property principles and copyright law in practice. First, I will examine the practical repercussions and philosophical defensibility of very long copyright length – for which recorded sound is an extreme outlier. Second, I will trace the concomitant expansion of scope along with duration extension and its impact on the use and reuse of creative works. Third, I will introduce the problem of media ephemerality – a concept mostly absent from philosophical discussions of intellectual property rights, but which, I will argue, should be a fundamental consideration. Finally, I will survey the history and current status of sound recording access and preservation, illustrating how preservation in practice is often carried out by actors other than the rightsholders, and how many rightsholders neglect or hinder preservation activities.

A. Duration: "The Artifice of Eternity"

Copyright is available for any creative work in any fixed medium of expression; since 1989, it is *automatically* applied to *every* creative work in every fixed medium. What works *aren't* copyrighted, then? Works outside of copyright control enter what is known as the *public domain* – a reservoir of works that have passed out of rightsholder control and can be freely used, adapted, and drawn from. They are a constitutive part of what James Boyle calls "the opposite of property",[229] an intellectual commons likened to libraries or public parks – physical common spaces intended to be open to all. Under current law, works enter the public domain in three ways: by declaration of the rightsholder, by virtue of having been created by the United States government, or by expiration of the term of copyright. Rightsholders may choose to release works into the public domain prior to the statutory expiration of the works' copyright, but are under no obligation to do so. Works in the public domain may be copied and distributed without restriction, making their preservation very easy from a legal standpoint; without rights restrictions to play a consideration, all that is needed is the labor, expertise, and funding to carry out preservation tasks.

The preceding Part traced the extension of federal copyright duration in the United States, from a maximum of 28 years in the eighteenth century to the current 95 years for works for hire / life-plus-70 for natural persons. Under the current copyright duration, works may not enter the public domain for, in some cases, more than 150 years after their creation. For example, if Joe Sixpack writes a hit tune at age 19 in 2018, retains the copyright, and dies at age 99, the compositional copyright will pass into the public domain on January 1, 2169.[230] For audio

[229] Boyle 2008, pp. xiv-xv. Boyle's conception of the public domain also includes uncopyrightable facts and ideas. See also Merges, at p. 145, who notes two broad species of entities considered public domain: things that can never be subject to intellectual protection (such as facts and ideas), and things that once were, could have been, or could yet be protected, but are not at current (such as works whose copyright has expired, works that fell out of copyright due to failure to follow formalities, and creative works not yet fixed on a permanent medium, respectively).
[230] Copyright coverage continues through the last day of the calendar year of expiration.

recordings fixed after February 15, 1972, the current term is 95 years, meaning those sound recordings will begin entering the public domain at the end of the year 2067 under current federal law.[231] Post-1978 recordings are eligible for life-plus-70 terms if the works are not made for hire. A few recordings may have fallen out of federal copyright protection between February 15, 1972 and March 1, 1989 (the implementation date of the Berne treaty) if the copyright holders failed to follow notice and registration formalities, but there has been no attempt to identify and catalog them, and it is difficult and expensive to conduct the legal research needed to substantiate that a work is no longer copyrighted.[232]

For sound recordings fixed before February 15, 1972, copyright protection is, somewhat counterintuitively, even longer than 95 years – in some cases *much* longer. The Sound Recording Act of 1971 did not retroactively extend protection to older recordings, and to this day, those recordings are afforded no federal copyright protection.[233] States and major cities such as Los Angeles responded to reports of record piracy in the 1960s and 1970s with their own copyright or quasi-copyright protections, such as criminal antipiracy statutes and prohibitions on unauthorized distribution of recordings.[234] Some are more restrictive in terms of scope than federal law,[235] and some less.[236] Some of these statutes are perpetual as written (meaning that they will be in force until federal preemption takes place in 2067, according to the current Copyright Act); a few of them are temporally bound, expiring prior to 2067. However, since very few prospective redistributors of copyrighted sound recordings would be likely to distribute only within the boundaries of a single state, the more restrictive laws would still impinge generally upon reuse of pre-1972 recordings.[237] Furthermore, state common-law copyright protections may also be available to many holders of pre-1972 recording copyrights.[238] In *Capitol Records v. Naxos of America* (2005), common-law protections were affirmed by the state of New York,[239] where many commercially lucrative sound recordings have been fixed. Naxos Records was

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[231] 17 U.S.C § 304; Peter Hirtle, "Copyright Term and the Public Domain". Available at < http://copyright.cornell.edu/resources/publicdomain.cfm >.

[232] Hirtle also notes that works created and published in Afghanistan, Eritrea, Ethiopia, Iran, Iraq, and San Marino are not copyrightable in the United States, because the copyright laws of these countries are not matched to international agreements. Per *Golan v. Holder*, 565 U.S. ___ (2012), these are subject to copyright restoration should those countries' governments enter into the relevant agreements.

[233] Excepting internationally-fixed sound recordings which have had their copyrights restored according to the Uruguay Round Agreements Act of 1994, Pub. L. 103–465, 108 Stat. 4809.

[234] Jaszi 2009, pp. 6-7.

[235] E.g., some state statutes do not recognize a right of fair use, and others do not provide exemptions for libraries and archives or are vague on the terms by which such institutions may make copies. June M. Besek, *Copyright Issues Relevant to Digital Preservation and Dissemination of Pre-1972 Commercial Sound Recordings by Libraries and Archives*. Council on Library and Information Resources, 2005, p. 22.

[236] E.g., some are limited to commercial infringement. An example is the state of Washington; see RCW 19.25, "Reproduced Sound Recordings". Available at < http://apps.leg.wa.gov/rcw/default.aspx?cite=19.25&full=true >.

[237] Register of Copyrights 2011, p. 47.

[238] As Scott M. Martin has noted, sound recordings, like unpublished works, thus actually had copyright duration *limited* by the 1972 and 1976 Acts, since in the absence of these acts, the recordings could be protected indefinitely at the state level, though perhaps with diminished protection in some jurisdictions. Martin, pp. 263-264.

[239] *Capitol Records v. Naxos of America*, 2005 NY Slip Op 02570 (4 NY3d 540). See also Register of Copyrights 2011, pp.76ff.

found to have infringed New York state copyright by selling recordings in the US that were recorded in the United Kingdom and had entered the public domain (both composition and recording) there. The New York Court of Appeals, in *Capitol Records v. Naxos*, asserted that state protections remain in force even for pre-1972 recordings that have entered the public domain in other countries.

Thus, aside from those generated by the federal government or released into the public domain by their creators,[240] essentially *all* sound recordings, back to the earliest fixations of audio, still enjoy various forms of state copyright protection in the United States,[241] and will not enter the public domain until January 1, 2068 – nearly two hundred years for some of them.[242] The reservoir of public-domain recordings is effectively dry. It is another strange quirk of American law that the lack of federal jurisdiction over early sound recordings may in fact be an accident, born from a misunderstanding by the Department of Justice about the coverage of the pending bill that was to become the 1976 Copyright Act. The proposed bill in the Senate contained a provision federalizing pre-1972 recordings, but the Department of Justice, believing that it did not, recommended that the bill be amended to retain state antipiracy and common-law protections, and the Senate committee did so before passage. The House committee then removed the federal protection, since the bill already specified that state protections for pre-1972 recordings would continue.[243] Whatever the case, the perplexing end result is that pre-1972 sound recordings, which had no copyright protection at all until barely forty years ago, are now, due to some combination of accident, inaction, and ineptitude, subject to a copyright duration longer than that of any other class of creative works.

As a matter of intellectual protection, this is a problem unique to the United States, where state and federal copyright together blanket the entire recorded history of music – *all* music, not merely American music, if the *Naxos* decision is taken as precedent.[244] Outside the United States, most countries have defined limits on sound recording copyright terms, in contradistinction to the typical pattern of life-plus-70-years for most European countries. For

[240] The recordings published by the Edison Corporation prior to 1929, including many early cylinder and shellac records, were released into the public domain, but few other companies or artists have followed suit. Tim Brooks, "How Copyright Law Affects Reissues of Historic Recordings: A New Study". *ARSC Journal* 36 (2005), pp. 183-203, at p. 185.
[241] Henry Lee Mann, "As Our Heritage Crumbles Into Dust: The Threat of State Law Protection for Pre-1972 Sound Recordings". *Wake Forest Intellectual Property Law Journal* 6 (2006), pp. 45-68; Tim Brooks, "Copyright and Historical Sound Recordings: Recent Efforts to Change U.S. Law". *Notes of the Music Library Association* 65 (2009), pp. 464-474; Register of Copyrights 2011, p. 5. Extensive summaries of state civil statutes, criminal statutes, and common law relating to audio recordings are given in Register of Copyrights 2011, pp. 20-49, and in Jaszi 2009.
[242] For instance, a cylinder recording published by an American company in 1890 will, when federal copyright preempts state statutes in 2067, have been protected for 177 years, more than one hundred years longer than most countries' lengths for sound recordings and 82 years longer than standard works for hire length in the United States. See National Recording Preservation Board, *The State of Recorded Sound Preservation in the United States: A National Legacy at Risk in the Digital Age*. Council on Library and Information Resources, 2010, p. 110.
[243] Mann, pp. 52-53.
[244] Tim Brooks, "Only in America: The Unique Status of Sound Recordings under U.S. Copyright Law and How It Threatens Our Audio Heritage". *American Music* 27 (2009), pp. 125-137.

instance, most European countries had 50-year terms for sound recordings until 2011, when a European Union directive recommended extension of the term to 70 years.[245] By 2013, most member states had moved to a 70-year term. Strangely, one of the rationales put forth for the proposed European extension was the existence of the 95-year term for most post-1972 recordings in the United States.[246] Given that the 1976 and 1998 Acts were themselves intended to harmonize with longer European terms, European attempts to mirror this situation have resulted in an international 'copyright arms race' of sorts;[247] the nations of the Western world have harmonized their laws to the point where all offer copyright control well beyond the minimum standards required in international agreements.[248] It seems plausible that, prior to 2031, the European Union will see fit to issue another directive providing for a 95-year sound recording term, in time to keep the lucrative works of the middle and later 1960s under copyright into the second half of the twenty-first century. However, Europe declined to confer retroactive copyright to works that had already fallen into the public domain. This means that sound recordings published before approximately 1961 (depending on the country)[249] are in the public domain in many parts of Europe. The classic recordings of Elvis Presley, Ray Charles, Frank Sinatra, Chuck Berry, and other major American musicians are not copyrighted in Europe, but under current US law, they will remain under state copyright for some fifty more years.

The late twentieth and early twenty-first centuries played host to a flurry of commentary from legal theorists, philosophers, and activists, contending that very long copyright durations constitute a significant social and policy problem.[250] The passage of the Copyright Term Extension Act in 1998 became a flashpoint for the argument, resulting in a legal battle over the law's constitutionality. This culminated in the *Eldred v. Ashcroft* decision in 2003, in which opponents of the law argued that it constituted a de facto violation of the 'limited times' clause of the Constitution and that it contravened First Amendment principles of free expression.[251] The Supreme Court upheld the law, finding that life plus 70 years was still a finite term and that the law was enacted by Congress in a rational manner; the Court found the free-speech argument unpersuasive, because the CTEA did not change "the traditional contours of copyright

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[245] Directive 2011/77/EU of the European Parliament, September 27, 2011. Available at < http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:265:0001:0005:EN:PDF >.
[246] Natali Helberger, et al. "Never Forever: Why Extending the Term of Protection for Sound Recordings Is a Bad Idea". *European Intellectual Property Review* 5 (2008), pp. 174-181, at p. 181.
[247] "Since it was politically simpler to harmonize different national regimes at the highest common denominator than to fight to scale back acquired privileges, the ratchet effect was always upward." Baldwin, p. 303.
[248] Institute for Information Law, *The Recasting of Copyright & Related Rights for the Knowledge Economy*. University of Amsterdam, 2006.
[249] The UK, for instance, did not pass its 70-year term until November 2013, meaning that recordings fixed before January 1, 1963 entered the public domain there (though their underlying compositions are often still copyrighted). Among the recordings issued in 1962 were The Beatles' "Love Me Do" and Bob Dylan's debut album. See "The Beatles' 'Love Me Do' Hits the Public Domain in Europe". *Rolling Stone*, January 12, 2013. Available at < http://www.rollingstone.com/music/news/the-beatles-love-me-do-hits-the-public-domain-in-europe-20130112 >.
[250] Hugh Breakey, *Intellectual Liberty: Natural Rights and Intellectual Property*. Ashgate, 2012, p. 1.
[251] Michael Jones, "*Eldred v. Ashcroft*: The Constitutionality of the Copyright Term Extension Act". *Berkeley Technology Law Journal* 19 (2004), pp. 85-106.

protection", only its length.[252] Many observers posited that the extension was unjustifiable particularly on utilitarian terms, as providing little or no utility in advancing the arts or providing incentives to create.[253]

The year 2018 marks the twentieth anniversary of the Copyright Term Extension Act. If there is no Congressional action that year, works (other than sound recordings, of course) from the year 1923 will enter the public domain as the Times Square ball drops on New Year's Eve. However, it is plausible that a new round of extensions will be proposed in 2018, in order to keep post-1922 creations under copyright.[254] How should the term of copyright be determined – if, indeed, it should have a length limit? Demonstrating empirically that, say, a term of 75 years is preferable (in some important sense) to a term of 70 years is no easy task.[255] Some have tried, of course. William Landes and Richard Posner note that the marginal economic utility of copyrights is vanishingly small after about twenty-five years.[256] Rufus Pollock, applying a statistical-theoretical approach, estimates the optimal economic length of copyright to be fifteen years, with 95% statistical confidence the optimal length is less than 31 years and 99.9% confidence it is less than 48 years.[257] These estimates are all considerably shorter than current copyright, but their recommendations are riddled with consequentialist assumptions that would be unacceptable to deontological theorists. Scott M. Martin, in his exhaustive defense of copyright extension, wisecracked, "on the list of Eternal Questions Which Have No Answer, the question 'What is the correct duration for copyright protection' is second only to 'How many angels can dance on the head of a pin?'".[258]

Consider, instead, a simple thought experiment. In the debates over the 1976 Copyright Act, there was considerable discussion of the relationship between copyright duration and the lifespan of authors;[259] this debate recurred in the lead-up to the CTEA, and has precedents

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[252] *Eldred v. Ashcroft*, 537 U.S. 186 (2003), at p. 191.
[253] On this point, see e.g. Marvin Ammori, "The Uneasy Case for Copyright Extension". *Harvard Journal of Law & Technology* 16 (2002), pp. 287-325. More generally *contra* copyright extension, see, e.g., Kelly Slavitt, "The Copyright Term Extension Act: We May Know the Words, but Can We Find the Harmony?". *Michigan State University DCL Journal of International Law* 11 (2002), pp. 457-479; Kevin D. Galbraith, "Forever on the Installment Plan?: An Examination of the Constitutional History of the Copyright Clause and Whether the Copyright Term Extension Act of 1998 Squares With the Founders' Intent". *Fordham Intellectual Property, Media & Entertainment Law Journal* 12 (2002), pp. 1119-1149; Cecil C. Kuhne, "Forcing the Copyright Genie Back in the Bottle: Public Policy Implications of Copyright Extension Legislation". *Southwestern University Law Review* 33 (2004), pp. 327-345; Jennifer S. Green, "Copyrights in Perpetuity: Peter Pan May Never Grow Up". *Penn State International Law Review* 24 (2006), pp. 841-863; Arlen W. Langvardt, "The Beat Should Not Go On: Resisting Early Calls for Further Extensions of Copyright Duration". *Penn State Law Review* 112 (2008), pp. 783-811; Robert L. Bard and Lewis Kurlantzick, *Copyright Duration: Duration, Term Extension, The European Union, and the Making of Copyright Policy*. Austin & Winfield, 1999.
[254] Derek Khanna, "Guarding Against Abuse: The Costs of Excessively Long Copyright Terms". *CommLaw Conspectus* 23 (2014), pp. 52-125, at pp. 118-119.
[255] The example is from Saul Cohen, "Duration". *UCLA Law Review* 24 (1977), pp. 1180-1231, at pp. 1230-1231.
[256] Landes and Posner 2003, p. 476.
[257] Pollock, pp. 27-28.
[258] Martin, p. 255. Reformatted for clarity.
[259] Deven R. Desai, "The Life and Death of Copyright". *Wisconsin Law Review* 2011 (2011), pp. 219-272.

extending back to Thomas Jefferson.[260] As a heuristic to interrogate the persistent presupposition that length of life is relevant to copyright in some meaningful way, it seems intuitively useful to subdivide possible copyright terms into approximate classes hinging around the human lifespan. At the extremes would be no copyright protection and perpetual copyright, and in the middle would be three rough categories: terms that are significantly shorter than the human lifespan (such as the ten-year term proposed by Lawrence Lessig[261] and the 28-year term of the 1790 Copyright Act); those approximating the human lifespan (such as the 56-year term of the 1909 Copyright Act,[262] the 70-year fixed term now governing sound recordings in most of Europe, or a term lasting exactly the lifespan of the author, perhaps with a short extension *post mortem auctoris*);[263] and those significantly exceeding the human lifespan (including the 95-year/120-year terms now governing works for hire and the life-plus-70-year terms governing most other works in Europe and the United States).

Robert Merges has noted that a natural-law conception of intellectual property, whether Lockean or personality-based, "strongly implies that these are perpetual rights. While temporally unlimited rights are not, strictly speaking, a necessary adjunct of the natural law view, they have often been treated as a logical outgrowth of that theory."[264] In the subsections that follow, I will argue that there are good cases to be made that perpetual copyrights are, in fact, *undesirable* from both utilitarian and natural-rights standpoints. I will assume arguendo that terms significantly shorter than the human lifespan and terms approaching the human lifespan are reasonable under one or more of the three major defenses. Merges's hope for consensus at midlevel may indeed prove viable for the third category; copyright durations that significantly exceed the human lifespan are indefensibly long on *all three* philosophical grounds.

i. Utilitarianism

For utilitarians, the question is typically reducible to the term's effect on the drive for incentives. No doubt, the promise of rewards for the rest of one's life and the ability to provide

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[260] Jefferson proposed that all laws should be temporally limited to the scale of generations; on his reckoning, the living should govern the living, rather than the dead governing the living. Based on a contemporaneous actuarial table, he calculated that 19 years is the sensible extent of terms of laws to which adults are to be subject. His calculations assume a much shorter average lifespan (~40 years) than is expected in the twenty-first century. Letter from Thomas Jefferson to James Madison, September 6, 1789. Available at < https://founders.archives.gov/documents/Madison/01-12-02-0248 >. See also Desai 2011, pp. 227-243.

[261] Lawrence Lessig, *The Future of Ideas: The Fate of the Commons in a Connected World*. Random House, 2001, pp. 251-252.

[262] 56 years is significantly shorter than the current average human lifespan in most developed nations, but accounting for the likelihood that the vast majority of creative works of any value are made by persons who are teenagers or older, this is effectively a near-lifetime protection, in most cases, for persons who live into their seventies. Worldwide life expectancy for an infant born in 2015 is 71.4 years, according to the World Health Organization. See < http://www.who.int/mediacentre/news/releases/2016/health-inequalities-persist/en/ >.

[263] Saul Cohen suggested a term of life plus twenty years to provide for the author's immediate family for a reasonable period. Cohen 1977, pp. 1191-1192.

[264] Merges, p. 95.

for one's family after one's death are, for some artists, enticing incentives to create.[265] The prospect of postmortem artistic control of one's legacy, through the expected responsible stewardship of one's heirs, may also serve a utility function for authors in their own lifetimes, spurring them to create confident that the works are likely to be well regarded.[266] Moreover, some utility may be granted in international harmonization of copyright trade treaties, irrespective of the length of duration, insofar as uniform laws decrease barriers to trade across borders.[267] Nevertheless, there is little reason to believe that the most recent twenty-year extension acted significantly as an incentive for creators to generate new works they would not otherwise have worked to create, especially given that the extension occurs for a period well beyond their own lives.[268] Some economists have argued that longer terms may result in a significant increase in creation where the increase allows a larger lifetime revenue to come in to creators who are on the margin of converting to full-time work on their craft.[269] Yet empirical data is lacking in support of the idea that far-longer-than-lifespan grants significantly affect this breakeven point; moreover, conversion of part-time to full-time artists may be offset by the boon to working artists who then choose to retire on their continuing royalty streams.

Neil Netanel has noted that some economic copyright theorists (including William Landes and Richard Posner), whom he calls neoclassicists, take a different approach to utilitarian theory, and apply it to the extraction of value from *existing* works, not merely spurring the creation of new ones. Under this rationale, copyright in principle should have no length limitation, except where copyright value approaches zero or is defeated by market failure concerns (such as tracing costs that outpace the rewards of bringing the works to market).[270] Yet there are side effects of long copyright protection that serve to hobble the processes of creating, experiencing, and preserving music – and these have become considerable, particularly for genres of music whose generative processes do not adhere strictly to Romantic notions of highly

[265] But see Desai 2011, p. 256, who challenges even this supposition, both by noting that authors may already leave tangible property to heirs (which I address *infra*) and that authorial royalties are a very uncertain future revenue stream.
[266] Eva E. Subotnik, "Artistic Control after Death". *Washington Law Review* 92 (2017), pp. 253-313, at pp. 293, 303-304. Subotnik notes that such attempts at postmortem control are rare.
[267] This theory is empirically shaky, at best. William Patry, "The Failure of the American Copyright System: Protecting the Idle Rich". *Notre Dame Law Review* 72 (1997), pp. 907-933, at pp. 930-931.
[268] Boyle 2008, at pp. 23-24, quotes Lord Macaulay at length on this subject to great effect.
[269] Stan J. Liebowitz and Stephen Margolis, "Seventeen Famous Economists Weigh In on Copyright: The Role of Theory, Empirics, and Network Effects". *Harvard Journal of Law and Technology* 18 (2005), pp. 435-457, at pp. 439-440.
[270] Netanel 1996, p. 368, discussing Landes and Posner 1989. Stan J. Liebowitz argues that increased revenue from existing sound recordings militates in favor of copyright extension, but he discounts all non-economic considerations of value in his analysis, and his account naively assumes a tragedy of the commons where no one would invest in maintaining works in the absence of exclusive rights. The latter is empirically untenable, based on the actions of archival institutions and reissue companies, as I discuss below in Part IIID. Stan J. Liebowitz, "What Are the Consequences of the European Union Extending Copyright Length for Sound Recordings?". International Federation of the Phonographic Industry, 2007, esp. at p. 21.

original, individualistic creation.[271] Longer terms increase costs to prospective users of intellectual goods that would otherwise become public domain,[272] without offsetting this drain on utility through an increase in creation of new works.[273] At best, a longer term might result in a gain in the making of derivative works, since rightsholders would be incentivized to develop their properties for new generations. But it is much more likely that more derivative works would result from public-domain status than from the exclusive control afforded by copyright. The prospect of a grant of term extension (whether retroactive or prospective) encourages rent-seeking behavior, an economic term referring to self-interested lobbying of political systems in order to acquire personal wealth that creates no wealth generally for society.[274] Furthermore, as Netanel argues, long-term copyright can be seen as a constriction on free speech and public discourse, which might serve to subvert human flourishing if it comes into conflict with the functioning of an open democracy.[275] Efficiency, proportionality, and nonremoval considerations militate against a utilitarian defense of very long copyright duration.

ii. Lockean theories

For Lockeans, the crux of the issue is the nature of the grant of property one is entitled to receive in return for the act of authorship. In a memorandum probably written in 1694, Locke explicitly rejected perpetual copyright as vested in the Stationers' Company, though he was equivocal about how long authorial rights should last. At one point, he states a 50-year limit, and at another alleges it "reasonable to limit their property to a certain number of years after the death of the author, or the first printing of the book, as, suppose, fifty or seventy years."[276] If one makes a strict analogy to real property based in natural rights to the fruits of one's labor, a Lockean could justify perpetual ownership; rights in intellectual works would transfer at death, indefinitely, through the same mechanisms as tangible goods.[277] This was the position of

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[271] Current copyright scope and duration is a Procrustean bed for, e.g., twelve-bar blues traditions, the remix culture of electronic dance music, and cut-and-paste aesthetics such as are found in instrumental hip-hop. This is addressed in more detail in Part IIIB.

[272] Richard A. Epstein notes, "there is no obvious reason to limit the duration of rights in real property. The long period of ownership spurs development, but since only one person can farm at a time, it does little to crimp utilization at the back end. With copyright, the possibility of multiple utilizations of the item, without exhaustion of its physical properties, allows for a realization of gain if the term is cut short. This gain is not found in real property, and makes copyright unique." Epstein, p. 25.

[273] Liebowitz and Margolis, p. 447.

[274] Landes and Posner 2003, p. 476; Merges, pp. 169-171. Many of the imprecations hurled at Disney and similar corporations for their lobbying in support of the Copyright Term Extension Act were, at heart, motivated by the belief that this economic behavior was afoot.

[275] Netanel 1996, pp. 368-369.

[276] Justin Hughes, "Locke's 1694 Memorandum (And More Incomplete Copyright Historiographies)". *Cardozo Arts & Entertainment Law Journal* 27 (2010), pp. 555-572, at p. 559. No justification is given for these figures. Hughes interprets Locke as possibly supporting a life-plus-50 or life-plus-70-year term in his commentary, but Locke's sentence structure is ambiguous, and he appears to be stating that some quantity, perhaps 50 or 70 years, beyond death would be reasonable, or alternately a 50- or 70-year term after publication (cf. pp. 559, 571).

[277] Locke himself imposed obligations on parents to provide for their children, but also defended the right to choose how one's property is distributed after death (including to those not related by blood). Later scholars have attempted to resolve this tension, with varying degrees of success. See Eva E. Subotnik, "Copyright and the Living Dead:

nineteenth-century anarcho-libertarian theorist Lysander Spooner, who argued for a perpetual intellectual property right based in theories of property. Since men typically (and rightfully) provide for their families rather than for strangers, according to Spooner, their intellectual works naturally ought to be assigned to immediate relatives in the absence of positive evidence to the contrary. He took public acquisition of intellectual works to be tantamount to seizure of inherited physical property; for Spooner, "[t]here is no species of robbery…more atrocious" than inheritance taxes and, by extension, the public domain.[278] A similar natural-rights position was advanced, unsuccessfully, in a report prepared for the 1831 revision of copyright.[279] R. Anthony Reese has suggested that Robert Nozick's account of Locke would likely comport with a perpetual intellectual property right, given Nozick's assertion that the author's rights are natural and prepolitical. In this conception, the state would not have justified grounds on which to limit property claims in privately created intellectual works.[280]

A perpetual right in intellectual works would run into midlevel proportionality problems that pose serious difficulties for Lockeans.[281] Is a perpetual right proportional to the effort involved in creation – especially given that heirs have put no effort into the work? Such a copyright permanently awards those fruits nepotistically to nonlaborers (whether they be blood heirs or the creator's assignees and *their* assignees, ad infinitum), and ignores counterclaims of any legitimate public interest in the works even after authorial death, while at the same time requiring that public to subsidize copyright enforcement through taxation mechanisms. Perpetual and far-longer-than-lifespan claims would conflict with the public's liberty to make use of a body of works it paid for and protected for decades beyond an author's death – and which, that public might defensibly argue, should be converted to an intellectual commons after some specified duration, in recompense.[282] Lockean theories based in desert fare little better – on what grounds can progeny claim to be *deserving* of control of their (great-grand)parents' creations?[283] This would reward descendants who have done no labor and had no aesthetic input in the creation of the work. Their claim to intellectual ownership rests in a legal formalization of the creator's natural rights of contract, and governments can and do constrain both property and

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Succession Law and the Postmortem Term". *Harvard Journal of Law and Technology* 29 (2015), pp. 77-126, at pp. 105-109, for a summary of the literature. In either case, the general principle – that property claims continue beyond the death of the laborer – is manifest in Locke's work.

[278] Lysander Spooner, *The Law of Intellectual Property: or An Essay on the Right of Authors and Inventors to a Perpetual Property in Their Ideas*. Boston: Bela Marsh, 1855, pp. 109-113. Rpt. in *The Collected Works of Lysander Spooner*, vol. 3. Weston, MA: M & S Press, 1971.

[279] Desai 2011, pp. 229-230.

[280] R. Anthony Reese, "Reflections on the Intellectual Commons: Two Perspectives on Copyright Duration and Reversion". *Stanford Law Review* 47 (1995), pp. 707-747.

[281] On Locke and proportionality, see Hettinger, pp. 41-43; Merges, p. 8.

[282] An example of this more measured view of Locke is given in Moore 2012, pp. 1087-1089. Moore notes that his account of Lockean intellectual property rights only justifies basic possession and use claims – not full property rights in the modern legal sense – and that the exact contours of the 'bundle of rights' are hashed out in the bargain between creators and society negotiating access (through contracts or law).

[283] More generally on this point, see Epstein, p. 7, and Subotnik 2015, pp. 78-81.

contracts to address Lockean limitations.[284] Since intellectual property is, in important senses, *not* like real property, those limitations could reasonably include restrictions on duration (or on rights of exclusion); in other words, the *strict* analogy simply does not hold.

Proportionality is also manifest in Lockean thinking through the limitation of 'enough and as good'; laborers may not draw from the common where they do not leave it essentially intact for others. But what constitutes an information common, and what is necessary to maintain it in 'enough and as good' condition, are contested questions. Lockeans could argue that enough has been left as good, even with a perpetual right in creative works, so long as others may make use of the ideas contained in the works or are able to generate their own ideas independently.[285] Nozick suggested that Lockean 'enough and as good' concerns for intellectual property could be solved through duration limitations based in likelihood of independent rediscovery. Terms of patents, for instance, could be pegged to expectations of how long it would take before someone else would have devised the invention or process anyway.[286] Applying a similar rationale to copyright is difficult, since, as Eric Claeys has noted, it is hard to approximate how long a creative work would likely be "the only source for the creative contributions it makes to the community."[287] A strict standard of independent discovery would almost surely justify perpetual copyright, since it is astronomically unlikely that, say, another author would recreate a previous work verbatim, even for a short poem or lyric. *War and Peace* will only be created independent of Tolstoy in the Library of Babel (perhaps penned by Pierre Menard, once he is through with Cervantes).[288]

Yet Claeys's standard – the contributions made to the community – suggests a shorter term in general, because culture moves quickly. The intellectual insights that works make are often focused on current or near-future concerns and audiences (thus the commonplace that virtually all but a handful of past masterworks, however defined, seem dated). Independent creation of ideas is frequent; creators respond in similar ways to cultural change, from disaster flicks (e.g., *Deep Impact* and *Armageddon*, both released in mid-1998) to copyright theory (Joseph Liu and Justin Hughes published similar theories of time-based fair use only a few months apart).[289] No doubt, mine will not be the only paper about the perils of excessive copyright duration issued in 2018. Protections extending long past the ~80-year life expectancy

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[284] Molly S. Van Houweling, "Disciplining the Dead Hand of Copyright: Durational Limits on Remote Control Property". *Harvard Journal of Law & Technology* 30 (2017), pp. 53-74.
[285] Reese 1995, at pp. 719-722, discusses these interpretations of the 'enough and as good' proviso in relation to Nozick.
[286] Nozick, p. 182.
[287] Eric Claeys, "Intellectual Property and Practical Reason". *Jurisprudence*, forthcoming, section VII.2.
[288] Jorge Luis Borges, "Pierre Menard, Author of the Quixote"; "The Library of Babel". *Ficciones*. Grove Press, 1962. See also Becker, p. 615. Then again, perhaps all of the books that will ever be written already exist, and are merely waiting to be discovered. See < https://libraryofbabel.info/About.html >.
[289] Joseph P. Liu, "Copyright and Time: A Proposal". *Michigan Law Review* 101 (2002), pp. 409-481; Justin Hughes, "Fair Use across Time". *UCLA Law Review* 50 (2003), pp. 775-800. Liu published his paper in November 2002, Hughes in February 2003. Liu and Hughes's proposals are discussed in Part VIIB.

of modern-day Americans would protect the vast majority of works well beyond the likely window for independent generation of their constitutive thoughts.

iii. Personality Theory

For personality-based theorists, there is an inherent tension between long terms granted to authors and long terms held after authorial alienation. It would seem that no lengthy duration could be acceptable if the link between artist and creative work is severed, as it typically is in, e.g., most recording contracts,[290] and particularly if such contracts fall under traditional notions of works for hire.[291] Yet this is not so much an issue of duration per se as one of auxiliary copyright structures that horn in on the author's natural rights. The fix, for a personality theorist, would not be to truncate copyright's duration, but to transfer its rights back to the creator. Concern for protecting the dignity, inviolate personality, or inherent genius of the artist might seem to demand perpetual extension of copyright and any related moral rights, as was sought by nineteenth-century American literary heavyweights such as Noah Webster and Mark Twain.[292] Hewing to this strong moral claim, then, would also seemingly demand adjustment of the text of the United States Constitution[293] and the adoption of systems of inalienable rights, which American law, by and large, has yet to recognize.[294]

Yet why would a personality-based intellectual right necessarily result in an enduring, perhaps perpetual, claim beyond death? Certainly, one cannot personally assert one's own wishes regarding the custody of an intellectual work in court once one has passed on; these wishes are set, insofar as they are articulated, at one's passing. Perhaps, instead, the link between artist and creative work is severed *at death*, rather than lasting eternally.[295] In this conception, justified control over intellectual objects for the sake of establishing and cultivating one's individuality and personality stops when one's individuality and personality ceases to generate new experiences; as Deven Desai has put it, "death is an inflection point that appears to extinguish

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[290] McLeod and DiCola, p. 81.
[291] See Part II, above.
[292] Desai 2011, pp. 228-234. The philosophy has its modern adherents; ee, e.g., Mark Helprin, "A Great Idea Lives Forever. Shouldn't Its Copyright?". *New York Times*, May 20, 2007. Sonny Bono, the sponsor of the Copyright Term Extension Act of 1998, and Jack Valenti, president of the Motion Picture Association of America, both favored perpetual copyright. Kuhne, p. 336.
[293] Lawrence Lessig's *Free Culture* was motivated in part by his experiences in attempting to have the Copyright Term Extension Act declared unconstitutional as a *de facto* violation of the 'Limited Times' clause in *Eldred v. Ashcroft*, for which he was Eldred's lead counsel. Lessig 2004.
[294] Except for the termination of transfer provision of the Copyright Act of 1976 and the provisions of the Visual Artists Rights Act. Other legal doctrines are sometimes used as ersatz moral-rights protection, such as unfair competition, breach of contract, defamation, and privacy torts. Kwall, pp. 17-33.
[295] Tom G. Palmer has puckishly suggested that the link between artist and artwork is actually severed at the moment of creation, and that it is the audience, rather than the author, which imbues it with vitality and meaning. Palmer, pp. 844, 848. But see Damich, p. 93, for how French courts have attempted to navigate these shoals.

those claims."[296] On this reading, it is not clear why the artist's heirs would be entitled to any control over the work beyond the artist's death.[297]

What is the rational basis by which moral rights would transfer from generation to generation (or to a perpetual foundation established in the author's memory)?[298] Under moral-rights systems, Mira Sundara Rajan explains, protections for the personal rights of authors continue for significant periods after death because an author "leaves behind a memory and a reputation that continue to command respect."[299] The caretaking of that respect would presumably be shepherded by the author's descendants.[300] Later generations may wish to grant *access* to the works, perhaps for the sake of remembrance or to self-interestedly burnish the family name, but it is not clear why their desire to *control* the dissemination of the works would trump or outweigh competing social interests in preserving the works and making them available as part of a public cultural heritage.[301] Furthermore, an author's heirs or assignees may not necessarily have the same conception of personal dignity or authorial intent as the author; they may squander the author's legacy or make decisions about cultivating that legacy which the author would have found misguided or embarrassing.[302] Maintaining authorial integrity is exceedingly difficult from beyond the grave, even if that author leaves detailed instructions in, e.g., a will or trust.[303] Lastly, there are persistent problems in resolving moral rights claims where there are differing wishes between joint authors – especially when one is dead while others are still alive.[304]

Ultimately, personality-based arguments, despite looming large in Continental theory behind term extensions, offer impoverished avenues of action for determining duration in actual practice,[305] and have proven difficult to reconcile with the preexisting commitments of intellectual property policy in the United States. Merges returns to the issue by offering a new approach, based in Kantian universal principles, which would limit duration. "We can argue, with Kant, that agreement with universal rational principles produces [intellectual property] protection, but that the same rational agreement would require that the rights be time limited", because the needs and autonomy of others must be built into the system that implements the

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[296] Desai 2008, p. 94.
[297] Keeping in mind that, in practice, it is typically the heirs of label shareholders, rather than musicians themselves, who maintain this control. Christopher Ledford, "The Dream that Never Dies: *Eldred v. Ashcroft*, the Author, and the Search for Perpetual Copyright". *Oregon Law Review* 84 (2005), pp. 655-680, at p. 673.
[298] Desai 2011, pp. 249-254.
[299] Sundara Rajan, p. 15.
[300] Some nations have established protective foundations for works judged to be of significance to cultural heritage, in which copyright or moral rights decision-making powers may be invested. Kwall, p. 16.
[301] Sundara Rajan, p. 16.
[302] Subotnik 2015, pp. 95, 123-124.
[303] Such articulation is rare. Subotnik 2015, p. 121.
[304] Subotnik 2017, p. 257.
[305] This is echoed by Efroni, at pp. 123-124. For an attempt to do so, see Abraham Drassinower, "Publish and Perish: Remarks on Copyright Duration". Paper presented at Colloquium on Philosophical Approaches to IP, George Mason University, May 18-19, 2017.

universal rights.[306] This offers a path by which finite terms could be built even into personality-based copyright regimes, and while speculation on the logical contours of such terms is left tantalizingly unexplored, Merges suggests they will rest upon mutual agreements about the necessities of human freedom and of what is mutually considered fair within a society.[307] Considerations of freedom and fairness imply that it is doubtful such a process would yield extremely long copyright durations.

iv. Additional Considerations

If none of the prevailing philosophical avenues musters a compelling defense of far-longer-than-lifespan copyright, are there more instrumental or pragmatic justifications that might be proffered in defense of the recent extensions? The term of life-plus-70-years for most works is sometimes defended as a system that provides to the next two generations: the creator's children and grandchildren.[308] While it might make sense to afford some nominal postmortem term to allow familial recouping, say, for authors who unexpectedly die young,[309] extending that term for decades does little to advance this specific purpose. At longer timespans, it seems likely to create a new aristocracy built around inheritance of intellectual goods, providing a state-ensured entitlement, rather than a safety net, to generations beyond.[310] Why are great-grandchildren necessarily entitled to benefit from their great-grandparents' intellectual works?[311] Why not the tenth generation, for that matter? The simple response is that creators wish to have some assurance that they can provide for their heirs, but there is already a property mechanism in place for this: transfer of *physical* property. Creators are entirely capable of assigning nonpublic goods (real property, chattels, financial assets, and cash) obtained from the copyright grant, in the event they wish to support their offspring from the hereafter.[312] This option is available to heirs even after copyright protection ends, since lapsing into the public domain does not end revenue streams for distribution of the work; it invites competition, but estates may respond by differentiating themselves in the marketplace in order to charge consumers a premium (with, e.g., 'authorized editions' or copyrightable derivatives containing bonus material).[313]

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[306] Merges, p. 95.
[307] Merges, p. 96.
[308] See, e.g., Baldwin, p. 253 (quoting George Haven Putnam in 1890 echoing this concern); Council Directive 93/98, 1993 O.J. (L 290) 5 (1993 European Union directive calling for life-plus-70 copyrights to be adopted by member states); Orrin G. Hatch, "Toward a Principled Approach to Copyright Legislation at the Turn of the Millennium". *University of Pittsburgh Law Review* 59 (1998), pp. 719-757, at pp. 729, 732.
[309] Cohen 1977, pp. 1191-1192.
[310] The recognition that copyright has the potential to create intellectual aristocracies dates back at least as far as the 1858 Congress on Literary and Artistic Property, an international conference which debated, and rejected, a recommendation of perpetual copyright in literary works – informed, in no small part, by experiences with contemporaneous publishing houses. Desai 2011, pp. 240-241. Examples of authorial aristocracies are given in Desai 2011, pp. 258-260.
[311] Hatch, at pp. 732-33, merely assumes this is a *fait accompli* of copyright. See Desai 2011, pp. 224-227, and Baldwin, pp. 253-257.
[312] Desai 2011, p. 256.
[313] "Guarantees of authenticity, quality, and ease of use may attract purchasers even if unauthorized copying is theoretically cheaper", notes James Boyle; the same is true in the market for public-domain works. Boyle 2008, p. 4.

Furthermore, even physical property grants are subject to limitations – testamentary transfers are limited by the rule against perpetuities, preventing testators from exerting control over generations of descendants.[314] If providing for heirs is to be one of the primary motivators for long copyright as public policy, a principled defense is sorely lacking.[315]

There is another possibility, which would follow on the copyright assignation for motion pictures and the lobbying of the sound recording industry for default copyright ownership in the 1970s. If one accepts the status quo of default corporate ownership of most copyrights[316] and of multi-artist collaboration in the modern creative process, one could claim that natural rights ought to inhere in the *company* that created the conditions which made the works possible and/or imbued those works with economic and cultural viability. This could then piggyback on the life-expectancy arguments advanced by the 1976 and 1998 Act supporters. Corporations do not die like people do; they can function indefinitely, and when they go out of business, their holdings are often purchased and absorbed by viable companies, like amoebae in a great chain of being. Perhaps this is sufficient justification to provide very long terms, either to protect their economic interests longer or to afford them greater control as engines of creation.

In a way, this suggestion harks back to the earliest defenses of authorial rights in literary works; seventeenth-century booksellers were apparently the first to argue for an inherent right of creative authorship, transferred by sale, which would last "in perpetuity – thanks to the booksellers' policing."[317] Nevertheless, large copyright holders might be flinching at the prospect of using an argument that so nakedly confirms the self-interested motives attributed to them by free-culture warriors.[318] Certainly, a perpetual corporate copyright suffers from the same defects as the privileges that preceded the Statute of Anne – the looming threats of monopoly and *de facto* censorship.[319] At midlevel, the argument is perhaps most vulnerable as a threat to dignity; it capitulates to a vision of creation as fundamentally mechanical, something manufactured and managed external to creators, rather than (at least in principle) springing forth from the human spirit. These words are, of course, rather decidedly personality-based in tone, setting up an intractable conflict between rival visions of long copyright – indefinitely for corporations, and indefinitely for authors.

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[314] Subotnik 2015, pp. 101-103. Subotnik notes, at p. 103, that the copyright term for long-lived authors is longer than the perpetuities period adopted in the Uniform Statutory Rule Against Perpetuities. This is an instance of *dead hand control*, which Eva Subotnik describes as "generally disfavored" in modern law. Subotnik 2015, p. 119.
[315] But see Subotnik 2015, arguing that the principles animating testamentary law can, to a limited extent, be profitably applied to copyright (but not for far-future postmortem periods).
[316] Krasilovsky and Shemel, p. 64.
[317] Johns, pp. 38-39.
[318] Khanna, at pp. 93-96, critiques the adoption of natural-rights property principles by corporate rightsholders who routinely adopt their new works from public-domain materials. The closest I could find to a defense of this justification was in a student law paper. Kaitlyn Rose Bernaski, "Saving Mickey Mouse: The Upcoming Fight FOR Copyright Term Extension in 2018". *Seton Hall University Law School Student Scholarship* (2014). 29 pp, at p. 23. Available at < http://scholarship.shu.edu/student_scholarship/439 >.
[319] Patterson and Lindberg, p. 87.

B. Scope: "Sick with Desire"

Copyright duration cannot be considered in isolation from copyright *scope*, since the robustness of any intellectual property protection is dependent upon the combination of these factors.[320] Thus, for instance, patent rights are stronger than copyright by design, but are much shorter in duration.[321] However, copyright duration extensions have been concomitant with increases in scope and extent of coverage. What constitutes a creative work has continuously expanded since the passage of the first federal copyright statute; sound recordings are only one of the most recent qualifying media.[322] The right to copy was, early in Anglo-American copyright's history, sometimes held by courts to mean only literal duplication of an entire work verbatim, without substantial change, but case law gradually expanded this to abridgments, corrections and enlargements, arrangements, and adaptations.[323] Statutes followed; the right of public performance for dramatic works was implemented in 1856,[324] rights of dramatization and translation were granted in 1870,[325] and the Copyright Act of 1976 codified a general right in derivative works,[326] in addition to the broadcast rights already discussed in Part II.

The tendency toward expansion of copyright scope tracks alongside changes in economics, technology, and ideas regarding the place of the creator in society. Eighteenth-century writers generally did not make a living off their works, but after the gradual demise of patronage systems in the late eighteenth and early nineteenth centuries (for both literature and music), authors and composers began to look away from nobility and the church, and toward the marketplace, to sustain themselves.[327] Over the course of the nineteenth century, machine papermaking, stereotyping, and rail transport all fed the desires of an increasingly literate reading

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[320] Benjamin Kaplan proposed they should vary inversely as a matter of principle. Benjamin Kaplan, *An Unhurried View of Copyright*. Columbia, 1967, p. 114.

[321] While patent term has gotten only marginally longer (the term of utility patents has increased six years since 1790, and is actually one year shorter than it was between 1836 and 1860, though since 1994 the term is calculated from date of filing rather than date of issuance), patent rights, too, have seen progressive increases in scope and available remedies, as have trademarks, over the course of the late nineteenth and twentieth centuries. Patents were extended to new entities such as industrial designs, plants, and surgical procedures in the twentieth century, and trademark, which until the mid-nineteenth century was essentially a tort intended to resolve confusions over manufacturer marks, gradually expanded to include all manner of make and model names, slogans, and trade dress (packaging and presentation of products and vending locations). Fisher 1999, pp. 4-9.

[322] "[M]ore and more categories of works are protectable…The nineteenth century saw an expansion to engravings and prints, musical compositions, dramatic works, photographs, paintings, drawings, and sculptures. Growth continued in the twentieth century with the application of copyright protection to motion pictures, computer programs, sound recordings, dance, and architectural works." Carrier, pp. 189-190.

[323] Kaplan, pp. 9-22.

[324] Act of Aug. 18, 1856, 11 Stat. 138.

[325] Copyright Act of 1870, 16 Stat. 198 (July 8, 1870).

[326] "A 'derivative work' is a work based upon one or more preexisting works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which a work may be recast, transformed, or adapted. A work consisting of editorial revisions, annotations, elaborations, or other modifications which, as a whole, represent an original work of authorship, is a 'derivative work'." 17 U.S.C. § 101.

[327] Kaplan, p. 22; F.M. Scherer, *Quarter Notes and Bank Notes: The Economics of Music Composition in the Eighteenth and Nineteenth Centuries*. Princeton, 2004.

– and playing – public.[328] As the business stakes of printing and publishing grew, so, too, did calls to regulate through copyright law and enforcement.[329] Artistic notions of creativity also came to the forefront, and the ideals of Romanticism began to prize innovation over imitation – suggesting that copyright ought to prohibit unauthorized adaptations and abridgments.[330] The trend of scope increase accelerated in the late twentieth century as intellectual property was ever more touted as the linchpin of a globalized economy built on information. Yet the expansive scope of copyright, coupled with duration increases, has gradually begun to interfere profoundly with creative, educational, and preservational uses of works. Many of these problems have been discussed in depth elsewhere,[331] so here I will briefly discuss a few of the major scope limitations on copyright, with a focus on one in particular – the crucial problem of fair use as it applies to sound recordings.

It is generally acknowledged, no matter what theory of creative genesis one subscribes to, that fashioning new works depends in part upon learning from what has come before. The *idea-expression dichotomy* is one constraint on copyright that helps ensure that creative or instructive reworking of preexisting material can take place. First articulated jurisprudentially in the 1880 decision *Baker v. Selden*,[332] the distinction between idea and expression maps neatly onto Fichte's first two categories; the particular intellectual embodiment of a work is protected, but the facts, ideas, and themes present in that work are the property of no one, and may be repeated and used without restriction. It is notoriously difficult to delineate which parts of a work should be considered merely general ideas, and which parts make up the fundamental expression of that work such that reproducing them constitutes infringement.[333] This is more true for imaginative works than for informational ones – factual works can be split more cleanly from their embodiments, but themes and ideas expressed on canvases, in abstract sound, or through interlaced images are much more difficult to separate meaningfully from their constituent expressions. Court decisions in the 1970s developed new tests for determining substantial similarity of works,[334] which increasingly resulted in findings of infringement for 'total concept and feel' that often seem to encroach on ideas themselves.[335] For musical works, this can be an especially difficult division to make, since even musicological experts may differ as to whether, say, a certain harmonic progression is an idea or an expression deserving protection.[336] It

[328] Johns, pp. 295-296.
[329] Fisher 1999, pp. 9-10.
[330] Kaplan, pp. 23-24.
[331] See, e.g., Vaidhyanathan; Litman 2001; Lessig 2001; Lessig 2004; Lawrence Lessig, *Code Version 2.0*. Basic Books, 2006, pp. 169-199; Lawrence Lessig, *Remix: Making Art and Commerce Thrive in the Hybrid Economy*. Penguin, 2008; Jason Mazzone, *Copyfraud and Other Abuses of Intellectual Property Law*. Stanford, 2011.
[332] *Baker v. Selden*, 101 U.S. 99 (1879).
[333] Netanel 1996, p. 304.
[334] *Roth Greeting Cards v. United Card Co.*, 429 F.2d 1106 (9th Cir. 1970); *Sid & Marty Krofft Television Productions Inc. v. McDonald's Corp.*, 562 F.2d 1157 (9th Cir. 1977).
[335] Vaidhyanathan, pp. 112-116.
[336] Rosen, pp. 2-3. An example is the acrimonious (and still unsettled, as of this writing) dispute over whether Robin Thicke and Pharrell Williams's "Blurred Lines" is substantially similar to Marvin Gaye's "Got to Give It Up". Kory Grow, "Robin Thicke, Pharrell Lose Multi-Million Dollar 'Blurred Lines' Lawsuit". *Rolling Stone*, March 10, 2015;

becomes yet more challenging with sound recordings, where separating the unique sonic qualities of a recorded performance from its standard components can seem a futile task.[337]

Another key check on copyright scope is the doctrine of *fair use*, a mechanism meant to allow certain uses of protected material without prior permission for the sake of "purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research".[338] As a concept, fair use can be traced back to *Folsom v. Marsh*,[339] which developed a set of criteria to balance authorial interests with the interests of downstream users (other creators and the public) in determining whether an unauthorized use infringed. Fair use was codified as part of the Copyright Act of 1976, but the four non-exhaustive factors enumerated in the law[340] are a litigator's dream – vaguely articulated general principles that demand case-by-case judgment.[341] The ambiguity of fair use has been criticized by myriad scholars, who argue that the uncertainty serves to retard creation of new artworks, growth of new art forms, and uses of artistic creations.[342] Assuming one's usages are fair can be risky, since a determination of fair use is always post-hoc; the boundaries of fair use are indistinct enough that any particular type of usage cannot reliably be employed until it is litigated. As Tom W. Bell puts it, "We often don't know what constitutes infringement unless and until a judge tells us."[343] The other option, pursuing rights clearance, is often prohibitively time-consuming and expensive.[344]

Althea Legaspi, "Pharrell Williams, Robin Thicke, T.I. File Appeal Brief on 'Blurred Lines' Verdict". *Rolling Stone*, August 24, 2016; Adrienne Gibbs, "Marvin Gaye's Family Wins 'Blurred Lines' Appeal; Pharrell, Robin Thicke Must Pay". *Forbes*, March 21, 2018. Available at < https://www.forbes.com/sites/adriennegibbs/2018/03/21/marvin-gaye-wins-blurred-lines-lawsuit-pharrell-robin-thicke-t-i-off-hook/ >.

[337] *Newton v. Diamond*, 388 F.3d 1189 (9th Cir. 2003).

[338] 17 U.S.C. § 107.

[339] 9. F.Cas. 342 (C.C.D. Mass. 1841). Kaplan, at p. 21, finds precedents in English decisions relating to abridgement and improvement of prior works.

[340] These are "the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; the nature of the copyrighted work; the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and the effect of the use upon the potential market for or value of the copyrighted work." 17 U.S.C. § 107. A similar but more circumscribed concept, fair dealing, is present in English law and the laws of many former British colonies, such as Canada, Australia, New Zealand, India, and South Africa.

[341] Patterson and Lindberg have noted, "one cannot expect universal agreement concerning what is and what is not fair use – even by the courts, where rulings on fair use are often overturned on appeal and decisions frequently have strong dissenting opinions." Patterson and Lindberg, p. 3. Pamela Samuelson collated fair use case law into what she calls "policy-relevant clusters", indicating that there is at least some coherence and regularity to fair use decision-making, though this does not necessarily translate down to the risk assessments users must make when considering fair-use actions. Pamela Samuelson, "Unbundling Fair Uses". *Fordham Law Review* 77 (2009), pp. 2537-2621.

[342] Joseph P. Liu, "Fair Use, Notice, and the Limits of Copyright as Property". *Boston University Law Review* 96 (2016), pp. 833-856, at p. 835. But see Merges, at pp. 249, 252, who argues that original creation drawn from ideas, rather than collage or remix work drawn from expressions, is inherently more deserving of protection.

[343] Bell 2014, p. 85.

[344] Mazzone, pp. 60-65; Neil Weinstock Netanel, *Copyright's Paradox*. Oxford, 2008, p. 21.

The basic contours of the fair use problem can be illustrated with an example drawn from the world of sound recordings: the growth of sampling, most commonly used in hip-hop and electronic music. DJs and producers, employing analog means such as manipulable reel-to-reel tape and turntable decks, as well as digital electronic audio sequencing technology that became cheap and easy to use in the 1970s and 1980s, took portions (*samples*) of other recordings and interpolated them within new works – using the expression of the old recording, rather than the idea.[345] These samples could be of varying length – in some cases, large portions of a work were adapted and looped with minimal change, but in others, small, altered sections of sampled songs, often dizzyingly juxtaposed with dozens of other such snippets, were refashioned into audio works that are analogous to visual collage or montage. The landmark *Grand Upright* lower court decision in 1991 declared sampling without a license to be infringement, resulting in an immediate chilling of the practice among musicians.[346] This was followed in 2005 by a circuit court decision in *Bridgeport v. Dimension Films*, asserting that sampling is infringement no matter how small the sample is.[347] *Bridgeport* effectively eliminated *de minimis* copying as a defense against infringement, leaving only fair use as a possible defense – and the language of the decision implied that fair use does not apply at all to the sampling of recordings.[348] Without a landmark decision reaffirming fair use in sampling, artists are generally unwilling to risk asserting their rights in the matter in court.[349] Very few cases involving fair use and sampling have actually been decided. Lawsuits are often used as "an escalation of the stakes that might nudge a musician who has used an unauthorized sample toward paying a fee."[350] Most are settled out of court, partly because the samplers can rarely afford court costs, and partly because record labels have wished to avoid having a legal interpretation of fair use that disfavors them become judicial precedent.[351]

Rightsholders of sampled materials, believing they have the legal upper hand in infringement cases, can thus set the market price for licensed sample usage. The result, in

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[345] Sampled recordings thus potentially infringe both the recording copyright and the underlying work copyright. McLeod and DiCola, p. 77. It has been suggested that, since recorded works are often created in the studio, with the record being the canonical form of fixing the work rather than written composition, the division between the work and the recording collapses entirely. See Paul Théberge, "Technology, Creative Practice and Copyright", in Simon Frith and Lee Marshall, *Music and Copyright*. 2nd edition. Routledge, 2004, pp. 139-156, at pp. 143-144; Mark Katz, *Capturing Sound: How Technology Has Changed Music*. University of California Press, 2004, pp. 156-157.

[346] *Grand Upright Music, Ltd. v. Warner Bros. Records Inc.*, 780 F. Supp. 182 (S.D.N.Y. 1991). The case concerned Biz Markie's sampling of a Gilbert O'Sullivan track; Markie's lawyers, inexplicably, did not mount a fair use defense in the proceedings. Vaidhyanathan, pp. 140-145.

[347] *Bridgeport Music v. Dimension Films*, 410 F.3d 792 (6th Cir. 2005). See Mazzone, pp. 55-59; McLeod and DiCola, pp. 139-147.

[348] "To begin with, there is ease of enforcement. Get a license or do not sample. We do not see this as stifling creativity in any significant way…if an artist wants to incorporate a 'riff' from another work in his or her recording, he is free to duplicate the sound of that 'riff' in the studio. Second, the market will control the license price and keep it within bounds." *Bridgeport*, at p. 801.

[349] McLeod and DiCola, pp. 238-243.

[350] McLeod and DiCola, p. 128.

[351] McLeod and DiCola, p. 242; Steve Greenfield and Guy Osborne, "Copyright Law and Power in the Music Industry", in Simon Frith and Lee Marshall, *Music and Copyright*. 2nd edition. Routledge, 2004, pp. 89-102, at p. 93.

practice, is exorbitant demands for rights clearance in music when sample usage is requested; recordings must be cleared, often at great expense and regardless of the age of the track or the amount sampled, before being sampled.[352] Furthermore, because some artists object to the process of sampling itself or the genre in which samples would be used, some sample requests are simply denied.[353] This is not a matter of mere inconvenience for sample-using musicians; many works of this type would be impossible to create without the ability to collage preexisting recordings, and there are often aesthetic or sociopolitical reasons behind the choices of what and how to sample.[354] It can no longer be held colloquially that sampling and remix cultures were a fad destined to pass within a few years and thus musically inconsequential. Sampling waxed in the 1980s, and chilled dramatically in the 1990s under legal thunder clouds, but the recent turn toward electronic dance music in pop has, arguably, made remixing more relevant than ever, as unauthorized mixes proliferate on user upload websites such as YouTube, Bandcamp, and SoundCloud.[355] The legal morass surrounding fair use in audio sampling, coupled with the lack of an audio public domain, significantly impacts the ability to legally fashion entire classes of new works.[356]

Fair use is not deemed a positive right in federal law; rather, it is couched as an exception to the exclusive rights of the author (or designee),[357] though courts have noted the important free-speech facet of fair use in decisions such as *Campbell v. Acuff-Rose*.[358] While fair use case law since that 1994 decision generally has been more hospitable to free-speech concerns of parody and inventive reuse/repurposing of works,[359] each battle must still be fought on its own turf – battles many content creators are ill equipped to fight simply to defend their rights.[360] The First Amendment acts as a limiting factor on copyright's ability to control the speech of non-rightsholders;[361] fair use has an important free-speech role to play for samplers, as well.

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[352] Anecdotal evidence indicates that sampling licenses increased substantially after the *Grand Upright* decision, though statistics are difficult to compile due to the private nature of settlements and licensing agreements. McLeod and DiCola, pp. 134, 158-163.
[353] McLeod and DiCola, pp. 62-66, 118-121.
[354] McLeod and DiCola, at pp. 20-26, detail aesthetic and political functions behind sampling in works by the Beastie Boys and Public Enemy, among others.
[355] Nowadays, sampling usually takes one of three forms. The most well-connected musicians signed to the largest labels can afford expensive sample clearance; less well-heeled musicians often approximate sampling by carefully re-recording and manipulating new sounds to mimic the original (permitted under the compulsory mechanical license); and others simply choose to sample and then distribute works in defiance of possible legal action, occasionally disguising the samples through digital processing or by burying them under layers of sound in the production mix. On sampling's legal status and relation to hip-hop production, see McLeod and DiCola; and Kembrew McLeod, "Musical Production, Copyright, and the Private Ownership of Culture", in Justin Lewis and Toby Miller, eds., *Critical Cultural Policy Studies: A Reader*. Blackwell, 2003, chapter 19.
[356] Netanel 2008, pp. 19-23; Patry 2011, pp. 93-94.
[357] David Pierce and Eric Schwartz, "Copyright, Preservation, and Access". *The Moving Image* 9 (2009), pp. 105-148, at pp. 132-133.
[358] 510 U.S. 569 (1994).
[359] Samuelson 2015, pp. 825-839.
[360] McLeod and DiCola, pp. 238-239; Liu 2016, p. 842.
[361] Boyle 2008, pp. 94-95; C. Edwin Baker, "First Amendment Limits on Copyright". *Vanderbilt Law Review* 55 (2002), pp. 891-951. Pamela Samuelson notes that mention of First Amendment concerns in fair use cases was

Ultimately, creators themselves have at least some vested interest in willingly limiting their own rights claims (or are beholden to limit them, on pain of irrationality of hypocrisy),[362] in recognition of the role that copyright overreach may play in stifling their own ability to make (and profit from) new works. Richard Epstein has suggested a parallel between, on the one hand, copyright and free speech, and on the other, property and trespass, noting, "Trespass law is useful for land only because of the network of public roads and waterways that allows for movement between various plots of private property. Similarly, we have a common domain of ordinary speech and language that is outside the scope of the copyright law…."[363] No similar "common domain of ordinary speech and language" can be said to exist in the realm of audio; no legitimate navigation is possible when all movement is trespass.[364]

Fundamentally, the generation of new works via digital sampling creates a derivative work. The (authorized) creation of sampled derivative works is hampered by fair use's vagueness,[365] but the downstream impact of fair use's imprecision extends well beyond new work creation; it affects preservation activities, as well. Is it, for example, a fair use to safeguard one's own audio possessions by making backup copies? The latter half of the twentieth century saw the introduction of a series of technologies that made the creation of copies – something that was more or less prohibitively expensive to anyone other than media publishers and professional counterfeiters – much easier than it had ever been before in human history. As late as the 1950s, infringing copyright required real effort – one needed technical means, time, and dedication to perpetrate an act that would contravene copyright law.[366] The photocopier, cassette tapes, and videocassette recorders in turn put the ability to proliferate copies within easy technological and economic grasp of ordinary consumers. These technologies could be used to make one's own works and distribute them, to copy the works of others for private use, or to distribute the works to friends, family, and beyond – potentially in violation of copyright.[367]

Each of these technologies was in turn met with responses from the content industries, which argued that the ability to make unrestricted copies facilitated infringement, and must be

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severely curtailed after *Harper & Row v. Nation*, because of the Court's holding, in a rejection of *The Nation*'s First Amendment defense, that First Amendment principles were "adequately protected by fair use and the idea-expression distinction". Samuelson 2015, pp. 857-858.

[362] McLeod and DiCola, pp. 121-124.

[363] Epstein, p. 23. See also Breakey, p. 105.

[364] A dissenting voice is Kevin Goldman, who takes the past few decades' worth of creative output as plain evidence that "artists have 'learned to swim' in a world without what has traditionally been thought of as an expanding public domain". Goldman, p. 707. Goldman seems to leave aside the more likely scenario, which is that of persistent infringement which goes largely unlitigated – in Merges's terms, a space of nonenforcement for, e.g., remix and sampling cultures. Merges, pp. 256-259, 295-296.

[365] Fair use creation of derivative works for preservation purposes will be revisited in Part VI.

[366] Boyle 2008, pp. 50-51; Bell 2014, pp. 79-80.

[367] In the twenty-first century, digital duplication is now trivially easy, and acts of massive infringement can be carried out in seconds, using one finger, by manipulating a device most Americans carry in their pockets This also means that "the potential audience for the fair use doctrine has greatly expanded". Liu 2016, p. 843. As technology makes it easier to copy and manipulate copyrighted works, the number of people who might make fair use of works, and the number of instances in which they might make fair use, increases.

stopped.[368] For instance, in the realm of music, a campaign known as "Home Taping is Killing Music" was famously launched by the British Phonographic Industry in the early 1980s in hopes of convincing the public to stop recording radio broadcasts of songs and purchase officially-released copies.[369] By this time, efforts to curtail commercial piracy of vinyl had been largely successful in the United States and elsewhere, and the record industry had begun to see private copying as the greater menace.[370] Lawsuits followed the mass-market introduction of commercial tape-based media, as it was unclear whether certain (or all) types of copying for personal use would fall under fair use. The RIAA had asked for Congressional action on home taping at the time the Sound Recording Act of 1971 was being considered, but did not get it. The fair use question as such remained unsettled, though it was implicit in Congressional inaction that it was unreasonable for home taping to be subject to regulation,[371] and the House report accompanying passage of the law specifically gave noncommercial home recording as an example of fair use.[372] For videotape, the *Sony v. Universal* case declared that recording television broadcasts for later personal viewing was, indeed, an instance of fair use.[373] The consensus that private home use is fair use was challenged in the 1990s, on grounds that the increasing ability to employ technology to track and report usage would reduce transaction and negotiation costs such that licenses for virtually any usage were now feasible.[374] Unauthorized home uses, by this rationale, constitute new, or newly suppressible, forms of piracy.

In 1992, Congress passed the Audio Home Recording Act (AHRA) to respond to the advent of technologies that could digitally reproduce sound recordings.[375] The recording industry sought to keep consumer digital audio tape recorders from reaching the market, claiming, as they had with cassettes a decade earlier, that they would enable widespread piracy.[376] Since digital audio tape could make perfect copies of recordings, they argued, it was even more of a threat than recordable magnetic tape, which, at least, would lose quality as copies of copies of copies were made. The AHRA levied a tax on digital audio recorders and digital audio tapes, and mandated that manufacturers outfit hardware with a copy-protection schema known as the Serial Copy Management System, which prevented the making of subsequent digital copies after the

[368] Mark A. Lemley, "Is the Sky Falling on the Content Industries?". *Journal on Telecommunication and High Technology* 9 (2011), pp. 125-135.
[369] Johns, at pp. 396-397, also notes recurrent attempts by British broadcasters to tar unauthorized *listeners* as pirates, a tradition extending back to the dawn of radio in the early 1920s. Listening to (or watching) broadcasts without a license, on this reckoning, was as damaging to the content industries as duplicating, and was equivalently blameworthy.
[370] Johns, pp. 445-446.
[371] Johns, pp. 447-448, 452-453.
[372] Halpern, pp. 981-982.
[373] 464 U.S. 417 (1984).
[374] Netanel 1996, p. 371, discussing the National Information Infrastructure White Paper of 1995.
[375] Pub. L. 102-563, 106 Stat. 4237 (1992).
[376] Litman 2001, p. 60; Bill D. Herman, "A Political History of DRM and Related Copyright Debates, 1987-2012". *Yale Journal of Law & Technology* 14 (2012), pp. 162-225, at pp. 170-171.

first copy of an audio file is made.[377] In exchange, the AHRA insulated consumers from lawsuits if they used recording devices to make copies for private, noncommercial use, though what qualified as a recording device under the law is narrowly tailored to devices primarily made and marketed for making audio recordings, such as reel-to-reel machines and audiocassette recorders. The devices that carried out the bulk of digital recording technology in the 1990s and later – CD-R recorders, computer hard drives, and mp3 players – do not meet these stipulations, which made the AHRA more or less a dead letter from the start.[378] However, AHRA is significant in that it was "the first copyright law mandating the adoption of a specific technology",[379] rather than merely regulating copying behavior. The statute made it illegal to manufacture a recording device that did not contain the Serial Copy Management System, foreshadowing future copyright architecture developments; six years later, the Digital Millennium Copyright Act would make similar requirements of videorecording devices. Copyright law became a tool to alter hardware design in ways that prevented any copying – even fair use copying, private home copying, or copying for archiving and preservation purposes.

Battles over music piracy are by no means new, but they garnered a higher public profile with the advent of digital media and peer-to-peer file sharing networks in the past quarter century. Copyright holders have a legitimate interest in stopping music piracy that is "merely venal copying of someone else's song products";[380] indeed, that is probably the least controversial exercise of copyright. The history of music publishing and recording does not lack for examples of counterfeits which pass themselves off as legal copies, but which are made at a fraction of the cost the rightsholder incurred to develop and manufacture them. Yet much of the alternatively distributed and shared music that has been differentiated as *bootleg* (rather than *pirate* or *counterfeit*) involves much richer cultural usages than this.[381] Music historian Barry Kernfeld has distinguished *equivalent* from *transformational* uses of music, where the latter is an instance in which "some person…comes up with a song product that in some respect offers a new way to appreciate music…. Transformational use involves imagination in one or more areas of our complex relationships to songs. A creative song product might facilitate musical technology, portability, fidelity, performance, enjoyment, or understanding."[382] These transformational uses often arise in response to new technological possibilities, or as means of satisfying desires to access and experience music in ways that are not supported by restrictive mechanisms of distribution employed by rightsholders. Transformational uses can be seen in a

[377] Partly due to this law, which essentially invalidated the new technology's chief advantage, and partly due to technological advancements with computer hard drives and compression algorithms for digital media (such as the mp3), digital audiotape never saw widespread adoption.
[378] Litman 2001, pp. 60-61; Herman, pp. 173-174.
[379] Herman, p. 175.
[380] Kernfeld, p. 126.
[381] Since the 1960s, aficionados have roughly distinguished three types of unauthorized distributions: *counterfeit*, a record that is passed off as if it were an authorized release; *pirate*, a record that duplicates an authorized release but does not pass itself off as authorized; and *bootleg*, a record that releases material not available through authorized channels. Kernfeld, pp. 174-175.
[382] Kernfeld, p. 4.

variety of unauthorized song products – jazz 'fake books' (compilations of popular melodies from which to improvise),[383] song sheets (a forgotten musical product – collections of lyrics of popular songs in booklet or magazine form),[384] cassette mixtapes for parties,[385] personal playlists shared via e-mail or streaming Internet media.

Fair use case law considers this tension; *transformative* use is recognized as having legal weight in the first factor of fair use determination. The *Campbell v. Acuff-Rose* decision established a precedent of weighing transformativeness heavily in judicial analyses of fair use.[386] That is not to say that any creative use at all which can be justified transformationally should eo ipso be permitted, nor have courts employed the concept of transformative fair use in this way. It merely indicates that all copyright restrictions come with social costs, that the balance of costs is often disrupted with the arrival of new technologies, and that there are often principled reasons for factoring those costs into regulatory decisions. Even when those decisions do not strictly reflect underlying copyright philosophies, they may be justifiable for the sake of mutual agreement on midlevel principles such as nonremoval, proportionality, and dignity. Does preservation constitute a sufficiently transformative use, in the sense used by the courts post-*Campbell*? Certainly, a chief principle of preservation is to seek *not* to transform the work itself if possible, but the change in the *purpose of use* acts transformatively in a way that courts have more often accepted in recent years.[387] However, the case law on preservation fair use, specifically, is thin.[388]

Further changes to copyright scope in the late 1990s, contemporaneous with the Sonny Bono Act, responded to (and anticipated) emergent transformational uses by strengthening copyright enforcement and drastically increasing punishments for infringement. The No Electronic Theft Act (NETA) of 1997 eliminated the requirement to demonstrate intent to pursue monetary gain from criminal copyright infringement, and raised possible damages significantly.[389] NETA was implemented in the wake of *United States v. LaMacchia*, in which a large-scale copyright prosecution of a student at MIT was unsuccessful due to the defendant's lack of a profit motive (he freely shared software and computer game code through an electronic bulletin board system).[390] Thus, those who distributed works freely could be held criminally liable, just as counterfeit records manufacturers were; in Rebecca Tushnet's words, "the distinction between capitalist pirates and anti-capitalist pirates no longer seemed adequate to sort

[383] Kernfeld, chapter 4.
[384] Kernfeld, chapters 2-3.
[385] Kernfeld, chapter 7.
[386] Samuelson 2015, p. 818.
[387] Samuelson 2015, pp. 845-850.
[388] In an exhaustive account of rationales employed in fair use case law, Pamela Samuelson notes only one instance of copying for preservation being found a fair use (*Sundeman v. Seajay Society, Inc.*, 142 F.3d 194 [4th Cir. 1998]) and a mention in the Senate report to the Copyright Act of 1976 which identifies preservation copying as a possible fair use, language which never made it into the legislated statute. Samuelson 2009, p. 2580, at footnote 302.
[389] Pub. L. 105-147, 111 Stat. 2678 (1997).
[390] *United States v. LaMacchia*, 871 F.Supp 535 (D.Mass 1994).

the most harmful infringers from the general herd."[391] This had the result of criminalizing peer-to-peer infringement of the type services like Napster, Morpheus, Audiogalaxy, and Grokster would foster just a few years later, but also encroached on private person-to-person sharing (now common through mechanisms such as Google Drive and Dropbox) and the activities of large-scale copyright-sharing institutions such as universities and libraries (e.g., interlibrary loan or public performance).[392] The implementation of NETA seems yet more severe in light of case law holding that copyright infringement obtains regardless of whether one intends to or knows that one is infringing – even in scenarios where one believes in good faith that one's usage (distribution, performance, parody, etc.) of the copyrighted work is properly licensed or qualifies as fair use.[393] In such a climate, it is unsurprising that the uncertainty and unpredictability in claims of fair use have led to observations of a chilling effect in practice.[394] The Digital Millennium Copyright Act (DMCA), passed less than a year after NETA, further increased penalties where circumvention of digital rights management technologies had occurred (though libraries, archives, and educational institutions were exempted from criminal liability).[395]

In such a legal environment, it is a wonder any digital music became available outside the limited distribution parameters set by rightsholding labels. Yet many works, simply put, *are* available, in quantities that may be fairly viewed as astonishing.[396] In the digital era, they were available through peer-to-peer services first; the record and film industries responded with a deluge of lawsuits, successfully going after Napster and Grokster,[397] and soon after, their own fanbase.[398] The entertainment industry also attempted to institute digital rights management (DRM) measures on audio, first with the Secure Digital Music Initiative (initiated in 1998 and abandoned by 2002),[399] then with the Sony BMG rootkit copy-protection scheme and Apple's now-abandoned FairPlay copy control for downloaded iTunes purchases.[400] Consumers chafed at the restrictions on their private home use of audio files, leading to the large-scale abandonment

[391] Rebecca Tushnet, "My Library: Copyright and the Role of Institutions in a Peer-to-Peer World". *UCLA Law Review* 53 (2006), pp. 977-1029, at p. 986.
[392] Tushnet, pp. 986-999. Fair use claims are ostensibly the divider here between free expression and criminal infringement, but as Tushnet argues, there is no bright line, and the blurriness constricts expression in practice; all four of the peer-to-peer music services mentioned were sued out of the file-sharing business for contributory copyright infringement.
[393] Litman 2001, p. 19. The relevant case law is *Bright Tunes Music Corp. v. Harrisongs Music Ltd*, 722 F.2d 988 (2nd Cir. 1983) and *Lipton v. Nature Co.*, 71 F.3d 464 (2nd Cir. 1995).
[394] Niva Elkin-Koren and Orit Fischman-Afori, "Taking Users' Rights to the Next Level: A Pragmatist Approach to Fair Use". *Cardozo Arts & Entertainment Law Review* 33 (2015), pp. 1-45, at p. 7.
[395] Digital Millennium Copyright Act, Pub. L. 105-304, 112 Stat. 2860 (1998), §§ 1203, 1204.
[396] Joel Waldfogel, "How Digitization Has Created a Golden Age of Music, Movies, Books, and Television". *The Journal of Economic Perspectives* 31 (2017), pp. 195-214, at pp. 202-203.
[397] *A&M Records, Inc. v. Napster, Inc.*, 329 F.3d 1004 (2001); *MGM Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005).
[398] The RIAA began suing individual users of file-sharing services for copyright infringement in 2003, a move widely seen as an abusive overuse of copyright's legal mechanisms. Steve Knopper, *Appetite for Self-Destruction: The Spectacular Crash of the Record Industry in the Digital Age*. Free Press, 2009, pp. 183-189. Some 18,000 Americans had been sued by the time the RIAA ceased the program in late 2008. Marshall 2013, p. 58.
[399] Knopper, pp. 150-156.
[400] Knopper, pp. 222-228, 232-233; Mazzone, pp. 82-83.

of audio DRM; meanwhile, enthusiasts found new venues for alteration and distribution of digital audio, uploading them to YouTube, remixing and compiling them on SoundCloud, distributing them as torrent files or via message board posts. The record industry has slowly assented to a digital future ruled by royalty-driven, on-demand streaming, now that the outside distribution channels are, themselves, well-established companies open to licensing negotiations. Robert Merges notes as much: "The Internet abounds with creative, cheeky, fun, and sometimes bizarre remix content. And all of this has been achieved without a broad fair use privilege".[401] Merges terms this *nonenforcement*: the acquiescence of copyright holders in the putatively unauthorized use of their works. While a few artists have actively waived rights, most merely tolerate these usages, without offering any overt authorization. They may do so for many reasons – steep enforcement costs, the promotional effect of allowing free distribution and/or alteration, the backlash that often follows legal action against one's fanbase. The ultimate result is a lack of systematic application of copyright holder's prerogatives, and an audience that seems to have wide (but uneven) latitude to infringe without penalty. According to Merges, "users do take the quasi norm of nonenforcement into account when deciding" whether to carry out an ostensibly prohibited use of a copyrighted work.[402]

Pervasive nonenforcement seems to pose a practical counterargument to calls for reduction in copyright duration and scope. If users can do mostly what they like with works, even if those uses are nominally infringing, why worry about obsolete or ineffective laws? Three problems come to mind. First, without effective legal defense for one's uses, the law ultimately acts like a constant sword of Damocles over the heads of those users, one that could be dropped to devastating effect at any time. This is particularly a problem for some of the most socially important usages – e.g., parody and large-scale copying for preservation or redistribution of out-of-print works – that are also the most likely to draw the ire of rightsholders. Second, as Merges notes, the increasing tide of nonenforcement (or, perhaps, the industry *perception* of massive and economically damaging nonenforcement)[403] played a part in enabling term extensions, increases in criminal liability, and the anti-circumvention provisions of the DMCA: "widespread infringement that cannot be effectively policed would lead to a desire for stronger [intellectual property] protection."[404] Progressively more severe penalties are implemented in response to the actions of scofflaws, which inadvertently discourages beneficial activities like preservation, in addition to being a deterrence strategy that is ineffective[405] and seemingly oblivious to the actual

[401] Merges, p. 256.
[402] Merges, p. 256.
[403] Johns, p. 435. But see Michael D. Smith and Rahul Telang, *Streaming, Sharing, Stealing: Big Data and the Future of Entertainment*. MIT Press, 2016, pp. 82-86, arguing that empirical analyses of piracy indicate that it does in general appear to harm sales.
[404] Merges, p. 259.
[405] Smith and Telang, at pp. 95-98, discuss three types of effective state-backed antipiracy action (which they euphemistically call 'partnering with governments'): infringement notices served to users; shutdowns of sites hosting infringing content; and governmental blocking of infringing sites through Internet service providers. Evaluating the moral legitimacy of these actions is outside the scope of the current document.

motives of many infringers.[406] Third, widespread nonenforcement highlights the persistence of a fundamentally dysfunctional system.[407] If society wishes to permit or encourage behavior (such as preservation of cultural heritage), it should not implement controls that make that behavior illegal, nor should it make prohibition enforcement arbitrary.

C. Ephemerality: "Fastened to a Dying Animal"

In addition to their role in encouraging cultural practices such as research, education, and commentary, limitations on copyright turn out to be vital to the carrying out of preservation activities. This is due to a further problem directly impinging on considerations of reasonable audio copyright: the inherent ephemerality of sound recordings and recording technologies. Ephemerality manifests itself in two ways. The first is the problem of *degradation*. Many of the earliest sound recordings are fixed on phonograph cylinders and shellac discs, which are two of the most physically fragile media carriers ever created. Cylinders, depending on their chemical makeup (a number of proprietary blends were developed), exhibit varying degrees of brittleness, and some will split or crack with just the ordinary handling needed to mount them on the mandrel of a playback machine.[408] Since some of the materials used in cylinder manufacture are organic, fungal growth is common, and cylinders cleaned of fungus may deteriorate due to residual pitting; chemical separation of the components is also common.[409] Some cylinders have cardboard or plaster cores that expand upon absorption of moisture, pressurizing the outer layer and, eventually, splitting the recording surface apart.[410] Shellac discs will shatter with the application of even moderate pressure or shock.[411] Shellac recordings are also vulnerable to water damage, which causes fine surface cracking known as crazing.[412] Cylinders and shellac discs which are still playable are extant in limited numbers, because even commercially released recordings were issued in small press runs, and playing them more than a few times can significantly degrade the carrier as the playback needle scrapes the grooves.

Cylinders and shellac platters kept in good storage conditions can survive for longer than a century, but engineering advances have soldiered on unabated, creating newer recording

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[406] James Boyle argues that proponents of copyright expansion essentially see this on a linear scale – "the strength of intellectual property rights must vary inversely with the cost of copying." Boyle 2008, p. 60. For a confirmation of this, see Liebowitz 2007, p. 9. The practical result in the Internet era, when copying is cheap, easy, and widespread, is, on this logic, drastically increased rights assignment, controls, and penalties for infringement – a position lampooned in Bell 2014, at pp. 80-83.

[407] Boyle 2008, p. 157.

[408] Peter Shambarger, "Cylinder Records: An Overview". *ARSC Journal* 26 (1995), pp. 133-162.

[409] Dietrich Schüller and Albrecht Häfner, *Handling and Storage of Audio and Video Carriers*. International Association of Sound and Audiovisual Archives, 2014, p. 10.

[410] Sam Brylawski, Maya Lerman, Robin Pike, and Kathlin Smith, eds. *ARSC Guide to Audio Preservation*. Association for Recorded Sound Collections, 2015, p. 16.

[411] Recent digital image scanning techniques have been developed which allow for partial reconstruction of the waveform of broken groove-based audio carriers. Naturally, preserving them before they break results in much higher fidelity preservation. Vitaliy Fadeyev and Carl Haber, "Reconstruction of Mechanically Recorded Sound by Image Processing". *Journal of the Audio Engineering Society* 51 (2003), pp. 1172-1185.

[412] Brylawski 2015, p. 18.

media with even shorter shelf lives. Instantaneous records, such as lacquer and acetate discs, became popular in the 1930s and 1940s, especially for radio broadcasting. They were designed to make convenient, quick recordings, and were typically composed of an aluminum or glass core with a soft acetate or nitrate coating. Once a recording stylus had cut grooves into the coating, the sound could be played back immediately. Significant and valuable corpuses of radio broadcasts and field recordings are held on instantaneous discs, yet the records were poorly engineered for long-term storage. As the chemicals comprising the information layer of the disc decompose, they begin to shrink; since the base materials are much more stable, the sound-bearing coating frequently peels from the base, a process known as delamination.[413] Cellulose compounds in the coating acidify, making the recordings brittle, and castor oil mixed into the coating will separate out and bead on the surface, destroying the playback groove.[414] Wire recording, used principally in the immediate post-World War II era, is another fragile and short-lived species of media. Wire recordings are rust-prone, and will easily break or twist into knots, since they are played back at high speed.[415]

Magnetic audiotape, in wide use in America (particularly in recording studios) from the late 1940s into the 1990s, consists of iron filings deposited on some sort of pliable substrate, called the backing. Paper was used early on, though it breaks easily; soon after, cellulose acetate backing was developed, which will shrink and embrittle over the span of decades.[416] The tape's magnetic layer does not shrink with the acetate layer, which leads to tape deformation and can accelerate shedding of the filings that contain the recording information.[417] Once polyester backing came into use, magnetic tape became more stable and reliable, but the introduction of matte backcoatings in the 1970s led to a problem known as sticky-shed syndrome. The non-playing side of the tape hydrolyzes, absorbing water molecules that cut longer polyester chains, and the tape begins to stick to itself, hampering playback.[418] Magnetic tape – open-reel, commercial cassette, or digital audio tape – is also easily subject to mechanical damage from improper playback and winding alignment.[419]

Optical disc media were introduced in the early 1980s, and have the advantage of allowing sound to be played without any physical contact between the information carrier and the playback machine. Professionally finished compact discs (CDs) are one of the most durable

[413] Schüller and Häfner, pp. 11-12. Because they are so fragile and often contain unique recordings, instantaneous discs are routinely designated the highest-priority medium for digitization in the technical guides published by the International Association of Sound and Audiovisual Archives.
[414] Jerry McWilliams, *The Preservation and Restoration of Sound Recordings*. American Association for State and Local History, 1979, pp. 42-43.
[415] Association of Research Libraries, *Sound Savings: Preserving Audio Collections*. Association of Research Libraries, 2004, p. 36.
[416] McWilliams, p. 17; Brylawski 2015, p. 24.
[417] Brylawski 2015, p. 24.
[418] Such tapes must be dry-heated in an oven or food dehydrator to restore playback capabilities temporarily. John W.C. Van Bogart, *Magnetic Tape Storage and Handling Guide*. Commission on Preservation and Access, 1995, pp. 4-5.
[419] Schüller and Häfner, pp. 35-37.

audio formats, and will likely last a century or more, so long as they are not scratched or abraded unduly. CD lasers have fairly robust error correction for light scratches on the read side of the disc, but deeper scratches on the read side, or scratches/markings on the label side which damage the data layer, will prevent proper playback.[420] Oxidation of the reflective layer of a CD renders it unplayable, though improvements in manufacturing processes after the first few years of the medium have made protective coatings generally reliable.[421] Recordable and rewritable CDs (CD-R and CD-RW) for the commercial market are far less reliable as data storage media. While CD-Rs were once touted as a stable preservation medium by archivists, it is now recognized that the dye comprising the data layer of a CD-R is light sensitive and will fade with exposure, sometimes in a matter of days if left in bright light.[422] The data layer of CD-RWs is a composite that can be reshaped into new data patterns after a high-temperature melting and cooling process, and "[n]o trustworthy analysis of the medium or long term reliability of RW discs has been undertaken."[423]

While each medium has characteristic decay susceptibilities, some degradation processes pose problems across media. Dust, dirt, and fingerprints can accumulate on playback surfaces, marring sensitive playback areas and encouraging fungal growth.[424] Ambient pollution and tobacco smoke can hasten chemical decomposition, and leave particulate matter on playback surfaces.[425] Insects and other vermin can pose dangers to any medium kept in suboptimal climates or stored with insufficient oversight; paper-based materials (vinyl covers, open reel tape boxes) and cassettes (which provide attractive nooks for small insects) are particularly vulnerable to infestation.[426] Every type of audio carrier is subject to processes of decay that threaten the existence of the cultural works it contains – masters of studio recordings, live performances, radio broadcasts, sermons, political speeches, oral histories; copyrighted works, all of them.

The shelf life of recordings continues to shorten, and not merely due to environmental stresses. In addition to threats posed by degradation, the technological *obsolescence* of materials, formats, and playback devices contributes to the problem of ephemerality.[427] Dietrich Schüller has noted, "[t]he instability of the carriers is aggravated by the ever-increasing speed of

[420] Brylawski 2015, p. 29.
[421] Schüller and Häfner, p. 28.
[422] Brylawski 2015, p. 30.
[423] Kevin Bradley, ed. *Guidelines on the Production and Preservation of Digital Audio Objects*. International Association of Sound and Audiovisual Archives, 2009, p. 128.
[424] Schüller and Häfner, pp. 38-39.
[425] Schüller and Häfner, p. 40.
[426] Schüller and Häfner, p. 40.
[427] Archivist Mike Casey has the linked the two concepts with the portmanteau 'degralescence'. Mike Casey, "Why Media Preservation Can't Wait: The Gathering Storm". *IASA Journal* 44 (2015), pp. 14-22. Edmonson refers to the problem of audiovisual obsolescence as *format progression*; the usage is analogous. Edmonson 1998, pp. 28-29. The term obsolescence – used to refer both to technological change and to social or psychological perceptions that adjudge fashions outdated – has been traced to Thorstein Veblen, who popularized it in *The Theory of the Leisure Class* (1899). Giles Slade, *Made to Break: Technology and Obsolescence in America*. Harvard, 2006, pp. 34, 285-286.

developing new formats in the digital domain and, as a consequence, the ever-shortened commercial life cycles of recording formats and systems."[428] The digital audio tape (DAT) format illustrates the problem well. First marketed in 1987, DAT saw only a few years of widespread use in professional audio settings (due in no small part to fears from the music industry over its ability to make high-quality copies), and was obsolete by 2005.[429] Recordings on digital audio tape are already becoming difficult to play due to paucity of working equipment, and building a machine that will read them is no small feat of engineering – they are not like vinyl records, for which a rudimentary low-fidelity player can be fashioned out of a needle and cone.[430] Working decks, spare parts, and professional expertise for DAT machines grow scarce with time. The market for manufacturing and servicing dwindles as the machines fall out of favor, making data recovery progressively more difficult.[431] Other audio playback machines are becoming similarly scarce; for instance, manufacture of open-reel tape players and parts has virtually ceased.[432] Obsolescence is thus a multifaceted term as applied to technology; things break, the parts needed to fix them are not available, and the knowledge needed to fix them (if parts do or could exist) dies out. Collectively, this process contributes in aggregate to a medium's decline, and thereby, to the decay of the intellectual works it fixes.

I focus here strongly on the *material* dimensions of technological obsolescence, which differs somewhat from the notion of obsolescence advanced in the digital humanities, most notably by Kathleen Fitzpatrick.[433] Her studies of novels and academic writing foreground the social and institutional mechanisms that lead broadly to the waning prominence of these intellectual vehicles, and she frames those mechanisms as fundamentally based in social decision-making rather than material erosion and breakage. Formats come and go; the relative fall from prominence of these media in the face of newer technologies and forms of cultural expression is not, in and of itself, a copyright or preservation problem. (Vinyl is still playable, even after all these years.) Fitzpatrick's notion of obsolescence, however, illuminates the important secondary role that social and institutional roles play in the lifespans of media, and how their neglect can enable material obsolescence in turn. Furthermore, the erosion of social

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[428] Dietrich Schüller, "Preserving the Facts for the Future: Principles and Practices for the Transfer of Analog Audio Documents into the Digital Domain". *Journal of the Audio Engineering Society* 49 (2001), pp. 618-621, at p. 618.
[429] Schüller and Häfner, p. 15.
[430] Indeed, it is likely that, if they were subject to federal protection, shellac discs (for example) would not qualify as an obsolete format under Section 108 of the Copyright Act, because turntables are still manufactured and widely available. See Besek 2005, p. 28.
[431] Schüller again: "Obsolescence of formats and equipment is accompanied by rapid obsolescence of ancillary objects, such as calibration tapes, leader and splicing tapes, empty reels and hubs, and, most notably, professional servicing capabilities." Dietrich Schüller, *Audio and Video Carriers: Recording Principles, Storage and Handling, Maintenance of Equipment, Format and Equipment Obsolescence*. Training for Audiovisual Preservation in Europe, 2008, at p. 16. Available at < http://www.tape-online.net/docs/audio_and_video_carriers.pdf >. See also the 'evolution of obsolescence' slope in Casey, p. 16.
[432] Bradley, pp. 52, 57.
[433] Kathleen Fitzpatrick, *The Anxiety of Obsolescence: The American Novel in the Age of Television*. Vanderbilt University Press, 2006; Kathleen Fitzpatrick, *Planned Obsolescence: Publishing, Technology, and the Future of the Academy*. New York University Press, 2011.

and institutional attention influences public and private decision-making about the distribution of resources that might be devoted to preservation activities, in addition to impacting (or *failing* to impact) the legal rules that promote or inhibit large-scale preservation and migration.[434]

In the Information Age, the problem extends beyond physical objects to the software involved in musical creation and manipulation, as well.[435] Library of Congress archivist Sam Brylawski gives the example of audio "recorded on hardware and mixed on… things like ProTools editing software…the new version of the software isn't compatible with the digital files that were made 10 and 20 years ago."[436] Opening such a file may require complex retrofitting using versions of older software, rarely subject to meticulous archiving and often themselves dependent on antiquated hardware and operating systems. Digital audio files that cannot be opened cannot be listened to; they are culture degrading as quickly as an application upgrade. It has long been remarked that the vast majority of copyrighted works lose most of their economic value soon after creation;[437] more and more, sound recordings are also losing their *existential* value over shorter and shorter timespans.[438]

D. Preservation: "Such a Form as Grecian Goldsmiths Make"

Who preserves cultural works? Who should be allowed to preserve them? According to the logic of copyright, the default position is that only the rightsholder is privileged do so, if preservation involves moving fragile works to new substrates, making derivative restorations of damaged works, or distributing copies to guard against loss. There are exceptions; for instance, fair use provides one mechanism by which anyone could, in theory, carry out preservation tasks. Colloquially, preservation is the domain of heritage institutions such as libraries, archives, and museums. Libraries and archives, specifically, enjoy some special exemptions for copymaking

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[434] Cultural and media studies scholars also sometimes use the term obsolescence in an analogous sense; see e.g. Marshall and Eric McLuhan, *Laws of Media*. University of Toronto Press, 1988, and the essays in Charles R. Acland, ed. *Residual Media*. University of Minnesota Press, 2007. It might be useful to refer to this fall from the public memory as *social obsolescence* to distinguish it from functional breakdown per se.

[435] Neil Chue Hong, "Digital Preservation and Curation: The Danger of Overlooking Software". In Janet Delve and David Anderson, eds. *Preserving Complex Digital Objects*. Facet Publishing, 2014, pp. 111-123.

[436] Tom Cole, "Saving the Sounds of America". NPR, February 13, 2013. Available at < http://www.npr.org/templates/transcript/transcript.php?storyId=171916723 >.

[437] "Most copyrights have very little economic value after twenty-eight years." Landes and Posner 2003, p. 500. Landes and Posner note, for instance, that during the period 1883-1964, less than 11% of registered US copyrights were renewed, even though the cost to do so was marginal. Landes and Posner 2003, p. 474. A British study of copyright extension found that "most sound recordings sell in the ten years after release, and only a very small percentage continue to generate income, both from sales and royalty payments, for the entire duration of copyright." Andrew Gowers, *Gowers Review of Intellectual Property*. HM Treasury, 2006, p. 52.

[438] The preservation literature is rife with dire predictions of the quantity of media which will have been irreparably damaged in X years. These claims are difficult to accept naively, and often serve more rhetorical than predictive ends. Mike Casey's more measured and practical assessment is illuminating: "10 or 15 years from now it will surely still be possible to digitize audio and video. Whether the means to *affordably* digitize *large* holdings will still exist at that time is an open question and one that must be seriously considered by those who have significant collections." Casey, p. 18.

under current copyright law,[439] but the quantity of copies they can make, as well as what they can do with those copies, is sharply restricted,[440] and best-practice preservation requires the making of copies well in excess of what current law allows.[441] Furthermore, other non-rightsholders, such as independent reissue record labels and private collectors, have played important preservation and access roles for audio works, despite copyright's presumptive constraint on many of their activities.[442] This is worth exploring in some detail.

The quick demise of sound recordings would be purely a question of practical effort if copyright duration were short; it would be minimally worrying if broad license were given to preserve and distribute copies of degrading works. Neither, as we have seen, can be counted on for audio. The problem would also be minimal if rightsholders consistently (and enduringly) dedicated themselves to meticulously preserving and keeping in print works they had previously created and released to the public. Yet on the contrary, rightsholders themselves have often neglected or played overtly antagonistic roles in fostering access and preservation, both with respect to sound recordings specifically and for creative works in general. In 1998, Orrin Hatch (who introduced the Copyright Term Extension Act to the Senate in 1997) argued that copyright extension was warranted because many important artistic works of the 1920s and 1930s, such as early films on fading physical carriers, would fall into the public domain and go out of print.[443] The loss of exclusive rights, Hatch asserted, would snuff out the incentive to preserve them, migrate them to digital platforms, and keep them commercially available; thus, far fewer works from those eras would be disseminated generally.[444] In terms of access, Hatch was staggeringly

[439] These exemptions, enumerated in 17 U.S.C. § 108, include making up to three copies for maintenance and preservation, not to be distributed outside the building premises; isolated instances of interlibrary-loan copying at patron request; and copying of works in the last 20 years of their copyright term for preservation or scholarship purposes. These do not apply to pre-1972 domestic sound recordings, since they have no federal term of copyright. See Besek 2005, pp. 9-12, 39. Section 108 is discussed in more detail in Part VIIB.

[440] On sound recordings and library/archival preservation copymaking, see Besek 2005, pp. 9-12; National Recording Preservation Board, pp. 120-125.

[441] "Application of digital preservation technologies can require producing multiple interim/buffer copies…If the term *copies* is narrowly defined, adherence to best practices for even routine digital preservation is both illegal and impossible." National Recording Preservation Board, p. 122. Emphasis original.

[442] Diane Leenheer Zimmerman, "Can Our Culture Be Saved? The Future of Digital Archiving". *Minnesota Law Review* 91 (2007), pp. 989-1046, at pp. 1001, 1028-1029; R. Anthony Reese, "What Copyright Owes the Future". *Houston Law Review* 50 (2012), pp. 287-318, at p. 316; Richard J. Cox, "Digital Curation and the Citizen Archivist". In Michele Valerie Cloonan, ed. *Preserving Our Heritage: Perspectives from Antiquity to the Digital Age*. Neal-Schuman, 2015, pp. 129-140.

[443] Hatch, pp. 736-737.

[444] This, a variant of the public goods problem in classical economics, is called "the underuse hypothesis" by Paul Heald and is a common argument by rightsholders for copyright term extension. Heald also identifies two other common arguments for extension: "the overuse hypothesis" – dilution of value when public domain goods are overused, e.g., in advertising or soundtracking, and "the tarnishment hypothesis" – works used for unsavory (often pornographic) ends that conflict with authorial intent, market value, corporate advertisement messaging, or public memory associations. Christopher Buccafusco & Paul J. Heald, "Do Bad Things Happen When Works Enter the Public Domain?: Empirical Tests of Copyright Term Extension". *Berkeley Technology Law Journal* 28 (2013), pp. 1-43, at pp. 15-17. Liebowitz and Margolis, similarly, refer to network effects (stemming from congestion externalities and the desire for aesthetic exclusivity) and misuse of copyrighted works. Liebowitz and Margolis, pp. 448-452.

wrong about music, in particular, at the time he wrote this; vast tranches of older musical recordings were out of print on CD (the then-dominant format) in the mid-to-late 1990s. There was no way to buy new copies of back-catalogue albums from many well-known musicians, with only greatest-hits collections available; many works of niche artists, even famous ones, were simply unavailable except via second-hand sales or bootlegs.[445] The digital revolution has eased this somewhat, and many older artists' works are now 'in print' again as mp3s, since production and distribution costs have fallen to the point where even a relatively small number of sales will justify the effort.[446] The recording industry was slow to warm to the demand for back-catalogue material online, and labels often refused to license their historical libraries to download or streaming services at all (or insisted upon restrictive DRM implementation, which proved unpopular with consumers and was abandoned by the late 2000s).[447] *Contra* Hatch, the increased accessibility of musical recordings in the digital era had much more to do with the activity of fans uploading out-of-print materials to Napster and other peer-to-peer file-sharing services of the early 2000s than it did with the labels themselves. As an Electronic Frontier Foundation attorney has noted, "One of the little reported stories about Napster was just how much new material became digital, that people, individual users, not companies, were digitizing old records, old tapes."[448] This behavior continued in the form of large-scale flouting of copyright on specialist music blogs[449] and user-upload streaming sites such as YouTube.[450]

A growing body of empirical evidence indicates that large numbers of copyrighted creative works remain out of print in every medium of expression. A 2005 study of music indicated less than ten percent of pre-World War II musical recordings were commercially available through their rightsholders,[451] and Lawrence Lessig calculated that only 2.3% of books and 6.8% of films released between 1927 and 1946 were still in print in 2002.[452] The assertion

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[445] On the dearth of progressive rock reissues, in particular, during the CD era, see Andy Bennett, "'Heritage Rock': Rock Music, Representation and Heritage Discourse". *Poetics* 37 (2009), pp. 474-489, at p. 484. The example is paradigmatic; I recall vividly my inability to listen to out-of-print albums in the genres of progressive and psychedelic rock, early electronic music, and jazz while growing up in the 1990s. This general lack of availability was the norm until the advent of peer-to-peer downloading and streaming around the turn of the 21st century. Simon Reynolds, *Retromania: Pop Culture's Addiction to Its Own Past*. Faber and Faber, 2011, p. 57.

[446] Chris Anderson, "The Long Tail". *Wired*, October 2004.

[447] Lee Marshall, "The Twenty-First Century Recording Industry". In Lee Marshall, ed., *The International Recording Industries*. Routledge, 2013, pp. 53-74, at p. 58.

[448] Joel Rose, "Copyright Laws Severely Limit Availability of Music". NPR, January 9, 2006. Available at < http://npr.org/templates/transcript/transcript.php?storyId=5139522 >.

[449] Rose 2006.

[450] Since YouTube's liability for infringement is limited by digital safe-harbor laws, it "creates a potential market for older musical works that remain available to consumers if the copyright owner is willing to monetize the upload or otherwise tolerates the infringement", including through lack of knowledge of said infringement. Paul J. Heald, "How Copyright Keeps Works Disappeared". *Journal of Empirical Legal Studies* 11 (2014), pp. 829-866, at pp. 856-857.

[451] Tim Brooks, *Survey of Reissues of U.S. Recordings*. Council on Library and Information Resources, 2005, at p. 13.

[452] These numbers come from an updated version of calculations done by Lessig's legal team during the *Eldred v. Ashcroft* deliberations. Jason Schultz, "The Myth of the Copyright 'Chaos' Theory". Available at < https://web.archive.org/web/20030315055026/http://cyberlaw.stanford.edu:80/lessig/blog/archives/jasonfinal.pdf >.

that copyright expiration results in desertion and lack of access to cultural goods does not hold up to empirical scrutiny; in fact, evidence indicates the converse is true, as Paul Heald has demonstrated over a series of articles examining availability and use of works at the cusp of the public-domain dividing line. Heald found in 2008 that even former bestselling books regularly fell out of print while still under copyright; 26% of the top-selling novels published between 1923 and 1932 were unavailable, while only 2% of those published between 1913 and 1922, on the other side of the public domain divide, were out of print.[453] He followed with another study, published in 2009, demonstrating that musical compositions published between 1913 and 1922 were used in films approximately as often as compositions published between 1923 and 1932. This indicates that public-domain works were not being abandoned or under-exploited, at least in the realm of synchronization licenses.[454] A third study, published in 2013, demonstrated that audiobooks of public-domain works published between 1913 and 1922 were significantly more available than audiobooks of copyrighted works published between 1923 and 1932.[455] A fourth, from 2014, reveals consistently higher rates of availability for public-domain books on Amazon.com than copyrighted books.[456] The claim made by the House of Representatives in 1998 that "longer terms would encourage copyright holders to invest in the restoration and public distribution of their works"[457] appears to be demonstrably false.

Hatch's trust in the entertainment industry's good-faith stewardship of the cultural works it publishes may be misplaced, as maintenance and preservation are rarely built into publisher and distributor business models. The history of sound preservation is replete with examples of shortsighted discarding by rightsholders of valuable archival master recordings and unreleased material. In 1997, music journalist Bill Holland published an article in *Billboard*, the leading U.S. music industry journal, after interviewing 71 people involved in the music business who had had access to music archives and vaults.[458] Holland detailed incidents where materials significant to the remastering and reissuing of historical recordings had been lost, overwritten, or discarded, including "metal record manufacturing parts, disc acetates, test pressings, and disc copies…monaural and stereo tape masters of singles and albums, safety copies, alternate takes and multi-track session tapes."[459] These items are often crucial to releasing high-quality reissues; without them, historical recordings cannot be remixed for better sound quality, and must be

[453] Paul J. Heald, "Property Rights and the Efficient Exploitation of Copyrighted Works: An Empirical Analysis of Public Domain and Copyrighted Fiction". *Minnesota Law Review* 92 (2008), pp. 1031-1063.
[454] Since any recordings of these songs must still be licensed, no matter how old, there are not necessarily cost savings to film studios for use of public-domain compositions. Paul J. Heald, "Does the Song Remain The Same? An Empirical Study of Bestselling Musical Compositions (1913-1932) and Their Use in Cinema (1968-2007)". *Case Western Reserve Law Review* 60 (2009), pp. 1-46.
[455] Buccafusco and Heald.
[456] Heald 2014.
[457] H.R. Rep. No. 105-452, at p. 4 (1998); quoted in Holly M. Sharp, "The Day the Music Died: How Overly Extended Copyright Terms Threaten the Very Existence of Our Nation's Earliest Musical Works". *Emory Law Journal* 57 (2007), pp. 279-310, at p. 290.
[458] Bill Holland, "Labels Strive to Rectify Past Archival Problems". *Billboard*, July 12 and July 19, 1997.
[459] Holland.

copied from existing commercial pressings (e.g., an excellent condition vinyl record). Record labels left materials in poor storage conditions and discarded live performances, unreleased materials, and studio master recordings, especially before the success of CD reissues clued companies in to the possibility of monetizing their catalogue releases.[460] Many publishers and record labels failed to keep stock copies, or even comprehensive records, of their own output.[461] Storage is expensive, and the materials were thrown out, bulldozed, or dynamited,[462] often as a simple cost-reduction matter; furthermore, turnover frequently left inexperienced and musically ignorant managers in charge of vaults, and when ordered to cut costs, some did so without any real understanding of the cultural worth of the stored items. An example is MGM, which, in a move intended to cut storage costs, junked a massive collection of its film orchestral scores and recordings.[463] Many major-label reissues of pre-World War II material, in particular, are now drawn from archival or private collections rather than the now-destroyed masters.[464] The 1979 *Thor Power Tool* decision eliminated a tax loophole relating to unsold business inventories, which had the practical effect of making it expensive to keep unsold inventory beyond the end of the fiscal year.[465] As a result, labels and publishers in many industries began dumping stock and turned increasingly to smaller print runs to make tax writeoffs easier.[466] Lastly, it should not be thought that digital creation and distribution will solve these problems. Rumors in 2017 that the online music streaming site SoundCloud was nearly out of funding led to a number of thoughtful (or panicked) journalism articles wondering what would happen to the hundreds of thousands of tracks available for streaming on SoundCloud and nowhere else, many from unique musical communities grown on the service itself, if the company went under.[467]

Sometimes, keeping old music in print is profitable. Yet it is not always so, and the other values that continued access to historical works bring to society are rarely persuasive to rightsholders in the face of economic losses. What Hatch seeks to protect inadvertently turns out, in practice, to be a small number of still-lucrative works, leaving the vast mass of materials protected by a copyright that keeps them inaccessible, and perhaps even condemns them to dust.[468] A variety of institutions could potentially step in to preserve and provide access to the

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[460] Holland.
[461] Zimmerman, pp. 1001-1003.
[462] Holland.
[463] Josh Getlin, "Keeping Track of the Scores". *Los Angeles Times*, December 16, 2004.
[464] Tim Brooks, "How Copyright Law Affects Reissues of Historic Recordings: A New Study". *ARSC Journal* 36 (2005), pp. 183-203, at p. 190.
[465] Kevin O'Donnell, Jr., "How *Thor Power* Hammered Publishing". Science Fiction and Fantasy Writers of America. Available at < http://www.sfwa.org/2005/01/how-thor-power-hammered-publishing/ >. The case in question is *Thor Power Tool Company v. Commissioner of Internal Revenue*, 439 U.S. 522 (1979).
[466] R. Michael Fling, *Library Acquisition of Music*. Music Library Association, 2004, p. 133.
[467] Jenna Wortham, "If SoundCloud Disappears, What Happens to Its Music Cultures?". *New York Times*, August 1, 2017.
[468] Congress spoke to this concern in its deliberations leading up to the 1976 Copyright Act: "since a large majority (now about 85 percent) of all copyrighted works are not renewed, a life-plus-50 year term would tie up a substantial body of material that is probably of no commercial interest but that would be more readily available for scholarly use if free of copyright restrictions." H.R. Rep. No. 1476, 94th Cong., 2d Sess. 133 (1976). See also Kaplan, p. 115.

works, among them libraries, archives, museums, universities, nonprofit trusts, third-party reissue labels, and private collectors, but the structure of copyright prevents them from doing so on solid legal footing, at least on anything other than the smallest of scales.[469] It is to the role of these secondary institutions that I will now turn – in particular, the roles of libraries and archives, reissue labels, and private collectors.

The early history of sound recordings is marked by a general neglect for them as cultural documents. Cylinders and early flat discs had poor fidelity and degraded quickly with play, making them seem like disposable ephemera; the musical score was instead considered the definitive sound preservation document. Collecting, preserving, and providing access to sound recordings was not a major part of the mission of libraries and archives until fairly recently. These institutions focused primarily on acquisition and preservation of paper materials well into the twentieth century, with media such as sound recordings a secondary consideration at best.[470] Early sound archives concentrated on classical music, folk musics, and ethnomusicological recordings; many forms of popular or commercial music were, and remain, unsystematically collected.[471] Since most libraries never methodically collected commercial sound recordings, they are far less reliable as vehicles for the survivability of such recordings than they are for books and monographs. Even today, many public and university libraries, at least in the United States, curate collections that provide minimal access to non-classical, non-jazz releases. Their holdings on disc or tape tend to be minuscule in comparison to the overall volume of music issued each year, and almost never circulate; normally, CD copies are kept solely for access, held only as long as they are not scratched by patrons, and are often culled when they no longer invite routine checkout. Collecting digital music, for libraries, fares even less well; it's still not clear how an institution can legally add digital items to its collections.[472] The contract terms of digital downloading services such as Amazon and iTunes can come with licensing stipulations that

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[469] To be fair, non-rightsholders are also subject to revenue constraints, and sometimes they, too, turn out to be poor preservation stewards; for instance, in the 1980s, the Oakland Public Library's collection of Southeast Asian cassettes was slowly erased as checkout librarians passed them through the security magnetizer. Novak, p. 623. See also Nicholson Baker, *Double Fold: Libraries and the Assault on Paper*. Random House, 2001. But these entities have institutional commitments to preservation, which is rarely the case for rightsholding companies.

[470] Tom Moore, "Sound Recordings". *Notes of the Music Library Association* 56 (2000), pp. 635-640; Carlos B. Hagen, "The Struggle of Sound Archives in the United States". *Library Trends* 21 (1972), pp. 29-52; Frank W. Hoffmann, *The Development of Library Collections of Sound Recordings*. New York: Marcel Dekker, 1979, pp. 2-8; Christopher Ann Paton, "Whispers in the Stacks: The Problem of Sound Recordings in Archives". *American Archivist* 53 (1990), pp. 274-280. As recently as 2008, collection development guides for libraries could say almost nothing about popular music recordings. See R. Michael Fling, *Guide to Developing a Library Music Collection*. American Library Association, 2008, pp. 37-57.

[471] For instance, an amusing illustration of past UK library practices in pop music collecting can be found in a 1970 collection of essays, describing jazz as "light" music which nevertheless had just begun to demand the librarian's attention, and popular "ephemeral" music, less worth collecting, as "includ[ing] so-called 'dance' music in all its weird varieties (ranging from foxtrot to 'beat'), and the modern equivalent of the Victorian popular ballad." L.G. Lovell, "Policy in the Provision of Public Gramophone Record Libraries". In *Phonograph Record Libraries: Their Organization and Practice*. 2nd edition. Archon Books, 1970, pp. 4-31, at p. 10.

[472] Sarah Baker, Peter Doyle, and Shane Homan, "Historical Records, National Constructions: The Contemporary Popular Music Archive". *Popular Music and Society* 39 (2016), pp. 8-27, at pp. 14-15.

disallow purchase from non-end-users or forbid lending to patrons.[473] Music released on subscriber services is likewise also difficult for libraries to obtain, both because the terms of service of such services often preclude library use and because the libraries cannot purchase and maintain any sort of local copy, physical or digital.[474] Naturally, they cannot preserve works that they cannot add to their collections. The redundancy that characterized prior library collecting of physical objects, helping to safeguard cultural works against loss, makes born-digital works potentially more vulnerable to destruction than any physical item in a preservation institution's care.[475]

Formal archives set up specifically for sound were created at the end of the nineteenth century in Berlin and Vienna, and some collections were founded in the United States as early as the 1890s for specific collections (such as for Jesse Walter Fewkes's ethnomusicological recordings).[476] In 1923, the Library of Congress began acquiring sound recordings, though at first their collection was not systematic, relying primarily on donations from record labels; eventually, though, this institution would become the largest sound archive in the United States.[477] The Rodgers and Hammerstein Archive at the New York Public Library, founded in 1935, and the Institute of Jazz Studies at Rutgers, founded in 1952, are also longstanding American institutions.[478] Other sound archives soon followed from the late 1950s onward, many of which sought out rare older recordings; the University of California-Santa Barbara's Cylinder Audio Archive, which holds more than 10,000 early cylinders (both commercial and home recordings), is one noteworthy example.[479]

Sound archives remain important vehicles for storage and preservation of fragile and rare recordings, many of which are out of print or were never commercially available (unreleased demo and studio material, live recordings, radio broadcasts, oral histories, and field recordings are but a few examples). Fair use, and the library and archival provisions of Section 108, would seem to allow them the ability to properly preserve the works, and perhaps even to make them publicly available in some circumstances. However, the number of copies they may legally make

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[473] D.J. Hoek, "The Download Dilemma". *American Libraries*, July 27, 2009. Available at < https://americanlibrariesmagazine.org/2009/07/27/the-download-dilemma/ >; Jenny Colvin, "For Your Consideration: Models for Digital Music Distribution in Libraries". *Music Reference Services Quarterly* 13 (2010), pp. 35-38; Judy Tsou and John Vallier, "Ether Today, Gone Tomorrow: 21st Century Sound Recording Collection in Crisis". *Notes* 72 (2016), pp. 461-483.

[474] Tsou and Vallier, at pp. 464-465, give an example of the extreme difficulty of negotiating library terms for user access to digital works.

[475] Alicia Ryan, "Contract, Copyright, and the Future of Digital Preservation". *Boston University Journal of Science and Technology Law* 10 (2004), pp. 152-176, at p. 158.

[476] John Vallier, "Archives, sound recording and moving image". *The Grove Dictionary of American Music*. 2nd edition. Oxford, 2013.

[477] Vallier 2013.

[478] Mary Russell Bucknum, "Music Sound Archives in the United States". *Fontes Artis Musicae* 48 (2001), pp. 381-390, at p. 382.

[479] See UCSB Cylinder Audio Archive, "About the UCSB Cylinder Audio Archive", available at < http://cylinders.library.ucsb.edu/overview.php >, and "Vernacular Wax Cylinder Recordings at the UCSB Library", available at < http://cylinders.library.ucsb.edu/homewax.php >.

is limited, their ability to distribute copies is severely restricted,[480] and they are unable to provide digital access to preserved items outside the confines of their physical buildings. It may be argued that libraries and archives would rarely be subject to legal action for making such works available, but librarians and archivists tend to be very risk-averse, and are generally unwilling to disrespect legal and personal rights to fulfill their mission.[481] Nonenforcement, in this context, does little practical work in terms of facilitating access and preservation, and the murkiness of state protections for pre-1972 recordings makes these institutions even more skittish.[482]

Rather than through libraries or archives, access to popular musical heritage, for most people, has been accomplished instead through the marketplace. The radio and record industries were the primary means through which much of the world experienced popular music culture for most of the twentieth century, though they face new competitors in the twenty-first via digital distribution channels. Record labels, as noted above, generally only kept materials in print based on economic demand, and older recordings judged no longer financially viable were cut from production, leaving only a relatively small number of older, still-popular recordings in print at any given time.[483] (Few labels could afford to keep their entire holdings in print, as Moses Asch demanded of his Folkways label before it was sold to the Smithsonian Institution in 1986; indeed, several agreements with for-profit labels broke down due to his unwillingness to compromise on this point.)[484] Furthermore, independent record labels routinely go out of business, and if their holdings are acquired by a larger company, reissue of the bulk of the defunct company's discography may not be economically justifiable.

This left a cultural lacuna; out-of-print recordings, for which a small but dedicated set of enthusiasts remained, would be unavailable except via second-hand sales in possibly obsolete physical formats. The task of providing access to such recordings has instead often been carried out by reissue record labels – third-party commercial institutions that issue recordings (with or without a license) which are no longer kept in print by their rightsholders. These labels have kept niche genres accessible to new generations, and are often run by devotees who are motivated by aesthetic concerns and who operate on slim profit margins due to the special-interest nature of their offerings. In many cases, they worked in open defiance of copyright law, arguing that the importance of public access to heritage outweighed claims of ownership by institutions that could not, or did not, make them available for sale.[485] Along the way, their efforts served

[480] For instance, sound recordings are not even eligible for the interlibrary loan provisions of Section 108(d).
[481] Tsou and Vallier, p. 473.
[482] Register of Copyrights 2011, pp. 70, 79-80, 84-85. An example of the lengths librarians will go to in order to abide by copyright's strictures is provided in John Vallier, "Fear and Control in a Rock n' Roll Archive". *IASA Journal* 43 (2014), pp. 62-69.
[483] Wim Dijk, "Availability of Sound Recordings in Public Collections". *Fontes Artis Musicae* 32 (1985), pp. 21-24.
[484] Frank W. Hoffmann and Harold Ferstler, *Encyclopedia of Recorded Sound*. New York: Routledge, 2005, vol. 1, p. 410.
[485] Johns, p. 436.

preservation purposes, by identifying works worth preserving, championing their cultural worth, seeking out and restoring rare recordings for release, and proliferating copies of those rare works.

The role of reissue labels is one that attracts little attention, either from academics or from access and preservation communities. A small clutch of very recent scholarship has begun to examine the place of reissue labels in musical cultures and markets, and how they fill in archival and preservational roles for music that institutional archives have neglected. Andrew Bottomley notes that reissues – whether they be greatest-hits compilations or meticulous re-creations of an original album's sound and packaging – fundamentally change the meaning and value of the works they contain;[486] they alter the reception history of those works, and thus are significant cultural works in and of themselves. A few case studies of reissue campaigns have made similar arguments in more detail.[487] Andy Bennett explained the work of what he terms "DIY preservationist" boutique reissue labels as part of a broader consciousness of shared musical heritage, one "designed to address the commercial bias of the major record labels by attempting to reposition hidden or forgotten artists and their music back into the frame of rock historical consciousness."[488] Sophia Maalsen notes that the identifying and remastering of unreleased and obscure music is overtly framed by its practitioners as a curatorial project, collecting and exhibiting works in a way that often contests the canonization activities of the marketplace (via major labels) and the musical literati (via music criticism in books, magazines, and documentaries).[489] Maalsen is one of several recent theorists who conceive of this activity as part of a larger contest of values over heritage activities, highlighting differences between what official (state/academic) or unofficial (market) heritage institutions identify as worthy of remembrance, and what amateur experts and nostalgic devotees champion.[490] By contrast, popular music historian Simon Reynolds critiqued the tendency of some reissue labels to compile hyperspecific stylistic quirks and present them retrospectively as romanticized genres.[491] Reynolds poses that some reissue activity serves little purpose other than to gin up market interest in self-released and minimally competent music; on this reading, the practice is motivated at least in part by economic desire to move stale stock or for the purposes of self-gratifying trendsetting.

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[486] Andrew J. Bottomley, "Play It Again: Rock Music Reissues and the Production of the Past for the Present". *Popular Music and Society* 39 (2016), pp. 151-174.
[487] Katherine Skinner, "'Must Be Born Again': Resurrecting the *Anthology of American Folk Music*". *Popular Music* 25 (2006), pp. 57-75; Polly McMichael, "Prehistories and Afterlives: The Packaging and Re-Packaging of Soviet Rock". *Popular Music and Society* 32 (2009), pp. 331-350.
[488] Andy Bennett, "'Heritage Rock': Rock Music, Representation, and Heritage Discourse". *Poetics* 37 (2009), pp. 474-489, at p. 485.
[489] Sophia Maalsen, "Reissuing Alternative Music Heritages: The Materiality of the Niche Reissued Record and Challenging What Music Matters". *Popular Music and Society* 39 (2016), pp. 516-531.
[490] Maalsen; Bennett; Bottomley; Les Roberts and Sara Cohen, "Unauthorizing Popular Music Heritage: Outline of a Critical Framework". *International Journal of Heritage Studies* 20 (2014), pp. 241-261; Sarah Baker, Peter Doyle, and Shane Homan, "Historical Records, National Constructions: The Contemporary Popular Music Archive". *Popular Music and Society* 39 (2016), pp. 8-27.
[491] Reynolds, pp. 151-153.

The history of reissue record labels is still largely unwritten. A few early manifestations can be found in the 1930s, when the English arm of Brunswick Records, as well as Milt Gabler in New York City, produced small-scale represses of unavailable titles.[492] Later in the decade, collectors of jazz records formed the Hot Record Society and began reissuing out-of-print American jazz with the implicit acceptance of the rights-holding labels. Early in the 1940s, labels such as Decca and Columbia planned reissue campaigns of their own, and revoked their consent from the Hot Record Society; the American entry into World War II, however, resulted in the scuttling of all of the projects.[493] In earnest, commercial-scale reissuance dates from the 1950s, with the debut of long-playing records that allowed for release of longer works (such as those captured on magnetic tape) or compilations of older 78rpm and cylinder recordings. At that time, many larger labels, often having significant back catalogues (and having purchased the catalogues of smaller labels), released materials of their biggest and most bankable stars, but historically significant music in less-lucrative genres, such as traditional jazz, folk, blues, country, and classical, remained out of print.[494] A cottage industry of reissue labels sprang up, both legitimately licensed and quasi-legally bootlegged; in the United States, labels like Riverside began licensing historic jazz records, but not all labels obtained prior permission for their operations.

An example of the latter is Dante Bolletino, a midcentury jazz enthusiast who shared with like-minded music buffs an interest in out-of-print 78-rpm recordings of early blues and jazz performers (including the likes of Louis Armstrong, Jelly Roll Morton, Benny Goodman, Bessie Smith, Bix Beiderbecke, Sidney Bechet, Fats Waller, Artie Shaw, and Billie Holiday).[495] Bolletino, with tongue planted firmly in cheek, founded a label in 1950 called Jolly Roger Records, and began pressing LP records compiling rare recordings that labels like Columbia and RCA had allowed to fall out of circulation decades prior. He even used RCA's own pressing plant to manufacture the discs.[496] Bolletino's business unquestionably would be illegal today; as noted above, it was not directly actionable as infringement at the time, but legal harangues nevertheless put him out of business after two years.[497] Yet there are significant transformational uses in Bolletino's actions, many of which Bolletino advanced in his own defense in the popular press.[498] Bolletino provided new access to cultural works that had fallen into obscurity, and his re-presses allowed them to be shared among new communities; furthermore, they were reissued

[492] Alex Cummings, "Collectors, Bootleggers, and the Value of Jazz, 1930-1952". In David Suisman and Susan Strasser, eds. *Sound in the Age of Mechanical Reproduction*. Philadelphia: University of Pennsylvania Press, 2010, pp. 95-114.
[493] Cummings 2010.
[494] Hoffmann and Ferstler, vol. 2, p. 915.
[495] Kernfeld, pp. 133-134; Johns, p. 439; Clinton Heylin, *Bootleg: The Secret History of the Other Recording Industry*. St. Martin's Press, 1994, p. 33.
[496] Cummings 2013, p. 55; Johns, p. 440.
[497] Indeed, bootleg and pirate recording activities in the early 1950s were a major catalyst in the formation of the Recording Industry Association of America, the principal arm through which established record labels have lobbied for greater copyright protection and enforcement to the present day. Johns, p. 444.
[498] Cummings 2013, p. 57.

in a new format, the 10-inch vinyl record (which was more durable than 78rpm discs), and were collated in one place for the first time.[499] Easier access made it simpler to learn from them and to create new works in response to them; listening to recordings became a key means by which new musicians learned to play and improvise, first in jazz and blues traditions, and then later in rock and roll.[500] It served pedagogical purposes, introducing new generations to what would become hallmarks of American culture.[501] Bolletino and his compatriots in bootlegging re-pressed early blues recordings that were "issued in minuscule numbers on local labels and long impossible to find in their original form",[502] serving an archival purpose as well. Among those compatriots was Moses Asch, founder of Folkways Records, who argued that keeping works out of print was simply unjustifiable. He was sued, unsuccessfully, for his reissuance of historic folk and blues music on the Harry Smith-edited 1952 compilation *Anthology of American Folk Music*.[503] For Asch, this was not merely a means of distributing and championing lesser-known musical works; it was, quite literally, a preservation effort, conserving the intellectual content of the recordings as the few remaining copies moldered.[504] These efforts rescued from oblivion works for which there may never have been a market but for the intervention of the bootleggers. In this way, one might claim bootlegging created significant value in the works; in some cases this was existing demand unmet by record companies (who dismissed old product as unsalable), and in others it was value the collectors generated sui generis through promotion, curation, critique, and reevaluation.[505] Ought the bootleggers, then, be entitled to a stake in intellectual property claims?[506]

Once large labels saw the market potential of repackaging older recordings for sale, many historic recordings became accessible to the public once again. Examples include the Victor anthologies of the 1950s and 1960s, reissues of Western art music and opera by Columbia,

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[499] Kernfeld, p. 134.
[500] Millard, pp. 248-257; Patry 2011, pp. 94-99; Evan Eisenberg, *The Recording Angel: Music, Records and Culture from Aristotle to Zappa*. 2nd edition. Yale, 2005, pp. 115-116; William Howard Kenney, *Recorded Music in American Life*. Oxford, 1999, pp. 14-16.
[501] Among Bolletino's bootlegs were the Hot Five and Hot Seven recordings made by Louis Armstrong in Chicago in the 1920s. It is by no means an exaggeration to assert that these recordings were as profound and influential a contribution to American musical culture as Stephen Foster's parlor songs, John and Alan Lomax's field recordings, or Elvis Presley's sessions at Sun Studios. In Andre Millard's words, they "might have been the most influential in the history of popular music, because they reached so many people." Millard, p. 249. Before Bolletino had even been put out of business, Columbia recognized there was a market for these historic recordings and reissued them in a box set. Kernfeld, p. 134.
[502] Heylin, p. 33.
[503] Carl Benson, "Folkways (label)". *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie. 2nd edition, 2001.
[504] Michael J. Madison suggests the term "pirate curators" for those who preserve knowledge in defiance of intellectual property protections. Madison, p. 1980.
[505] Cummings 2010, pp. 96-97.
[506] The question is rhetorical; no good Lockean nor personality theorist would argue the affirmative. Yet this 'if value, then right' theory of intellectual property has been used frequently by copyright maximalists, including large culture industry rightsholders. It is criticized in Lessig 2004, pp. 18-19. See also Patterson and Lindberg, at pp. 187-188, for a similar formulation.

HMV, and Deutsche Grammophon,[507] and the Columbia release of Robert Johnson's *King of the Delta Blues Singers* in 1961, which became a touchstone to legion million-selling blues and rock musicians in the 1960s.[508] Academic and study-related demand for folk and traditional music recordings, both commercial and ethnographic, spurred reissue campaigns around this time as well.[509] Budget labels, such as Pickwick Records, sought cheap deals with the larger companies to reissue out-of-print materials at bargain rates in drugstores and department stores.[510] Parallel to this, unauthorized issues, especially of unreleased studio and live material, began appearing particularly in the realms of opera and rock music, spurring one of the first anti-record piracy backlashes.[511] Collectors of Dixieland jazz, doo-wop, soul, rockabilly, garage rock, reggae, and other styles continued to collect works and release them in compilations for the benefit of fellow aficionados, even after the sound recording loophole was partially closed in 1972 – courting legal controversy while making available otherwise-inaccessible works that would have been prohibitively difficult or expensive to license.[512] When the CD was introduced in the 1980s, record labels began ambitious official reissue projects of their holdings in the hopes of attracting sales from consumers trading in old vinyl copies for the cleaner-sounding, more convenient and (in some ways) more durable new format.[513] Such releases concentrated around baby boomer nostalgia, and many of them soon cycled out of print again on CD; they were never intended as comprehensive access projects. A significant and devoted sub-industry of CD reissue continued, with labels such as Ace, Charly, Edsel, Sundazed, Collectables, and Rhino (the last of these later purchased by Warner and turned into a subsidiary for in-house reissues) negotiating for reissue of albums and singles that the major labels had left untouched in the digital era.[514] Reissue of non-Western music, both from the field-recording archive and from commercial albums never before available in Anglophone countries, also spiked, especially labels specializing in African and Asian music reissues.[515]

A study commissioned by the Library of Congress found that by 2005, more American records from the period 1890-1964 were available through reissue labels than through the current rightsholders.[516] An example is the recorded output of the Pace Jubilee Singers, an obscure Chicago-based gospel group that recorded for Victor in the 1920s. These works were out of print for decades and are tremendously difficult to find in their original physical format. Document Records reissued two volumes of the Pace Jubilee Singers' work in 1998 and 2000, pressing thousands of copies that at once made the group's work more accessible to musicologists and gospel devotees, and helped ensure the aging recordings' viability through migration to a new

[507] Timothy Day, *A Century of Recorded Music: Listening to Recorded History*. Yale, 2000, p, 133.
[508] Hoffmann and Ferstler, vol. 2, p. 915.
[509] William Ivey, "Issues and Reissues in Country Music Recordings". *Western Folklore* 35 (1976), pp. 162-172.
[510] Hoffmann and Ferstler, vol. 2, p. 835.
[511] Heylin, pp. 101-103.
[512] Cummings 2010, pp. 98-99.
[513] Lee Marshall, ed. *The International Recording Industries*. Routledge, 2013, pp. 44, 62.
[514] Reynolds, pp. 154-155.
[515] David Novak, "The Sublime Frequencies of New Old Media". *Public Culture* 23 (2011), pp. 603-634.
[516] Brooks, *Survey* (2005).

format and wide dispersal. Such CD reissues are particularly useful to libraries, most of which could not have afforded to acquire and care for the original releases of many historic classical, jazz, and blues artists.[517] There is a twist to this story: Document Records is based in Scotland. The label reissues large quantities of historic American music – jazz, blues, ragtime, gospel, folk music, bluegrass, and others – serving an access and preservation function for the American public from outside its borders.[518] Document is, in fact, careful not to issue work that is still in print through major labels or their reissue subsidiaries,[519] and its output consists of recordings that are public domain in the UK.[520] Copyright serves perverse interests here; it denies Americans their own cultural heritage, by hindering access and frustrating preservation, and leaves it to other countries to preserve and interpret that heritage. Even if the "Progress of the Useful Arts and Sciences" is not the *only* reason to institute copyright, copyright surely should not serve the purpose of acting as a parochial *impediment* to that progress.

Private collectors – some of whom also ran reissue labels – also played crucial roles in the survival of historical audio. Since, as noted previously, older recordings such as pre-World War II cylinders and 78 rpm discs were rarely collected systematically by institutions until well after they were in commercial decline, what is available today, both commercially and institutionally, can be credited in large part to the work of assiduous private collectors.[521] Some collectors explicitly saw themselves in this mold; amassers of immigrant music in the United States, such as Harry Smith (curator of the Anthology of American Folk Music) and polka collector Ford Porter, overtly did so to document folk cultures. Likewise, proto-ethnomusicologists like John Lomax, who made field recordings of folk and blues musicians, also collected records. In each of these cases, their collections went on to form important archives and were instrumental in later music reissue campaigns.[522] Radio broadcasts were recorded by private citizens who owned magnetic tape machines; these now comprise significant

[517] Sam Brylawski, "Preservation of Digitally Recorded Sound". In *Building a National Strategy for Digital Preservation: Issues in Digital Media Archiving*. Council on Library and Information Resources, 2002, pp. 52-66, at p. 56.
[518] Brylawski 2002, p. 56.
[519] Brooks, *Survey* (2005), p. 13.
[520] The tight connection here between Document Records and commercial rightsholders is an example of the best of what limited copyright can make possible in terms of access to recorded sound. As Tim Brooks has noted, the fact that most recordings go out of print "makes perfect business sense. The business model of large corporations is based on mass distribution, and while they may cater to the mainstream nostalgia market they cannot be expected to operate as would a nonprofit library or archive. That is precisely why the rest of the world has established a public domain for recordings more than fifty or seventy-five years old, so that cultural institutions and enthusiasts can pick up where commercial interests leave off and preserve and disseminate recordings when it is no longer worthwhile for the for-profit sector to do so." Brooks 2009, p. 130.
[521] For instance, the cylinder collections currently held by the Library of Congress, Syracuse University, and the University of California-Santa Barbara, which are the three largest institutional cylinder collections after the collection held at Thomas Edison National Historical Park, were all obtained from private hands. State of Recorded Sound Preservation, p. 36.
[522] Roy Shuker, *Wax Trash and Vinyl Treasures: Record Collecting as Social Practice*. Ashgate, 2010, pp. 18-19, 29-30.

components of archival sound collections.[523] In the mid-twentieth century, radio bootlegging became routine among opera enthusiasts, who taped Metropolitan Opera broadcasts and, in some cases, reissued them on LP records disguised as European performances.[524] Not all collectors were so unscrupulous about musical information, however. Collectors also played indispensable roles in systematically acquiring and organizing metadata regarding the existence of recordings and other relevant information, such as performance dates and names of performers, through the creation of discographies.[525] In 1972, archivist Gordon Stevenson remarked, "It seems that most libraries and archives in the United States depend largely on donations (at least when it comes to building historical collections),"[526] and in 2001, Mary Russell Bucknum noted, "The past two decades have brought a marked increase in the number of inquiries [to sound archives] from collectors wishing to donate or sell their collections."[527]

A recording by Skip James illustrates the case in point. James was a Mississippi blues guitarist who issued nine 78-rpm records on Paramount Records in 1931, to little contemporaneous acclaim. He largely ceased performing blues music and remained essentially unknown for the next three decades. In the mid-1960s, blues enthusiasts began trumpeting James's work after tracking down copies of the Paramount releases, which had dwindled in number to the point where they were virtually impossible to find; what few copies still existed had been stuffed in the basements and attics of rural black Southerners and secondhand record stores. James became a key figure in the blues revival of the 1960s, touring and recording once again until his death in 1969 – a figure whose latter-day importance was impossible to predict in 1931. Most digital copies of Skip James's 1931 Paramount Records release "Devil Got My Woman", for instance, are reproductions of a single physical instantiation, an excellent-condition shellac platter owned by Nick Perls.[528] Perls, the founder of reissue label Yazoo Records, reissued all of James's 1931 recordings in 1986, sourcing them from best-available original pressings (given that the master recordings had been destroyed by the 1940s). "Devil Got My Woman" has been reissued a multitude of times by European firms, for whom the recording, at least, is in the public domain; they often simply use Perls's recordings from the Yazoo release directly.[529]

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[523] State of Recorded Sound Preservation, pp. 30-31.
[524] Johns, pp. 441-443.
[525] Gordon Stevenson, "Discography: Scientific, Analytical, Historical and Systematic". *Library Trends* 21 (1972), pp. 101-135, at p. 103; Bruce Epperson, *More Important Than the Music: A History of Jazz Discography*. Chicago, 2013.
[526] Stevenson, p. 121.
[527] Bucknum, p. 383.
[528] Amanda Petrusich, *Do Not Sell at Any Price*. Scribner, 2014, p. 21.
[529] Petrusich, p. 21. It is unclear how (or if) these labels handle the composition component of licensing, though simple payment of the compulsory mechanical license appears to absolve them of legal trouble on that point in the United States. Prior to the passage of the Sound Recording Act of 1971, "[i]t was generally recognized that record pirates only had to pay the composer the two cent royalty fee to be exempt from further liability under the Copyright Act", though few actually did. Halpern, pp. 968-969.

The long history of institutional, third-party commercial, and private contributions to the preservation of audio heritage suggests that leaving preservation to rightsholders alone would result in a dramatically restricted cultural future. Preservation is better conceived of as a broad task that ought to be available to more than just creators and their designees, and to more than just specialized archival institutions. To the extent that modern copyright law disrupts preservation, it demands scrutiny; to the extent that modern copyright philosophy ignores the need to stimulate preservation, it lacks comprehensiveness. It is to this latter problem I will now turn.

IV. Copyright and Preservation

The twentieth- and twenty-first century history of sound recording preservation suggests a simple policy rule of thumb: it makes little sense for copyright duration to extend beyond the expected lifespan of the medium on which creative works are fixed.[530] This lends a rich new layer of metaphor to William Patry's assertion regarding current copyright's overreach: "just like medicine in proper doses may cure diseases or save lives, an overdose of that same medicine may kill the patient. Copyright is now at fatal strength."[531] Yet technological evanescence not only presents a challenge to the practical specifics of copyright law; it hints at a deeper problem at the core of intellectual property thinking. There is something missing from the philosophical bedrock, something that was not, and in a sense *could* not, have been integrated into any intellectual property theory until historical practice demonstrated what could happen when copyright became so long and media lifespans became so routinely short. The problems of old sound recordings, fixed on materials much more fragile and subject to imminent decay than the eighteenth-century media paradigm that copyright law and philosophy assumes, put into starkest relief a simple but critical oversight: all of the standard intellectual property defenses have failed to adequately account for the ephemerality of media in their rationales for copyright protection of creative works.

The Copyright Act of 1790 offered protection only to "maps, charts and books" – that is, items printed on paper. Paper, at that time, was hardy stuff; the thick rags upon which eighteenth-century documents were scribed or printed last for centuries, in most cases well beyond the life of any current copyright regime, let alone the 28-year maximum term of eighteenth-century law (assuming the documents are kept in reasonably hospitable storage conditions). Yet it is no longer sound to assume that books will last centuries, with the introduction of acidic, wood-based paper in the nineteenth century – a problem now all-too-familiar to bibliophiles, librarians, and archivists. The lifespan of most twentieth-century paper products has been cut from centuries to decades as the magnitude of the 'brittle books' problem

[530] As Diane Zimmerman notes, "The copyright statute as currently drafted takes very little account of the problem of preservation during the term of copyright." Zimmerman, p. 1011.
[531] Patry 2009, p. xviii.

has come to be recognized.[532] Methods to deacidify paper materials have been developed, but part of the impetus behind the major digitization projects that libraries have spearheaded since the 1980s was an understanding that the permanence and stability of any particular copy of an intellectual work cannot be guaranteed on longer timescales. This necessitates migration to new materials or new formats – that is, the *making of copies*. In another bitter irony of copyright law, copyrights were dramatically extended just as the world came to a renewed appreciation of how important the proliferation of copies would be to the survival of its cultural heritage.

That copyright's Enlightenment-era craftsmen had precious little to say about the interplay between physical degradation and intellectual protection should be taken, for the most part, as neither surprising nor unreasonable. Intellectual property thinking of the seventeenth, eighteenth, and early nineteenth centuries concerned itself with the protection of major works of intellectual effort that were captured in the most durable of media then in existence. Books in those eras were printed in numbers considered small by today's standards, but the works were promulgated among communities that generally held them in high esteem and treated their physical manifestations as revered collectibles.[533] To be sure, dust, mold, and bookworms were all potential sources of degradation familiar to book owners for centuries, but they are incidental rather than systematic, and would thus be easier to overlook in a philosophical analysis, even if they could not be ignored in practice. While there were certainly ephemera produced at that time which modern observers would deem copyrightable (such as broadsides), intellectual rights theorists would not sensibly have expected that the works their theories were meant to cover would be in serious jeopardy of disappearance due to physical decomposition over ordinary human life spans.[534]

Printing technology changed little in the period separating Gutenberg's press and the end of the eighteenth century.[535] In the early decades of the nineteenth century, increases in population and literacy rates, as well as the technological advances of the steam press, stereotyping, mechanized typecasting, and machine papermaking, collectively resulted in an explosion of both supply of and demand for printed materials.[536] As supplies of linen and hemp rags were exhausted, they were replaced with less-sturdy cotton and, soon after, wood pulp in mechanical processes.[537] Wood fibers have naturally occurring acids in cellulose, and additives

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[532] Terry Sanders, *Slow Fires: On the Preservation of the Human Record*. Videorecording. American Film Foundation, 1987.
[533] Lucien Febvre, *The Coming of the Book: The Impact of Printing 1450-1800*. NLB, 1976, p. 238.
[534] Much more likely was the disappearance of works due to destruction. Philosophers of the seventeenth and eighteenth centuries were no doubt acutely aware of losses due to fire (such as at the Library of Alexandria in 48 BC and the Library of Celsus at Ephesus in AD 262) and human devastation (sacking and burning of libraries was a routine part of warfare and religious or political upheaval throughout the imperial Roman period and the Middle Ages). The losses of books from antiquity due to neglect would also have been familiar; these theorists were direct benefactors of the recovery of lost works of Plato and Aristotle from Byzantine and Arabic copies in the late medieval era.
[535] Frederick G. Kilgour, *The Evolution of the Book*. Oxford, 1998, p. 98.
[536] Kilgour, pp. 98-113.
[537] W.H. Langwell, *The Conservation of Books and Documents*. Greenwood Press, 1974, p. 3.

to facilitate mechanized papermaking, such as chlorine bleach and alum, hastened the onset of brittleness in paper materials.[538] Wood-pulp paper was, in this respect, a harbinger. From the mid-nineteenth century onward, a dizzying variety of new, more fragile forms of cultural fixation and transmission were invented, disseminated, and eventually brought under copyright's aegis, including photographic processes such as the daguerreotype and ambrotype, nitrate and acetate film, videocassette, and the floppy disk, in addition to the menagerie of sound recording technologies already mentioned. Such changes demand reexamination of intellectual property principles that assume long-lived physical substrates; modern defenders of intellectual rights can no longer ignore the emergent problems raised by the advent of unstable intellectual content carriers.

Merges offers an account of why ephemerality matters. One of the chief midlevel principles he identifies is that of *nonremoval* – that "information and ideas in the public domain must not be taken away or privatized".[539] Merges's conception of nonremoval encompasses the idea of the public domain, but it refers not merely to works out of copyright; it also includes things not protected by copyright, such as basic facts, laws of nature, and commonly used narrative elements or *scenes a faire*[540] (which, in music, principally apply to song forms, chord structures, and the like).[541] These concepts treat the intellectual objects in question solely as *ideal* objects – at the levels of the idea and the work, rather than its instantiation in a material carrier. Works in the public domain, factual information, and the like are freely available to the public as theoretical entities, and creative expressions, under copyright, remain under rightsholders' control no matter what physical shape they take. They are treated as Platonic, eternal forms, existing in an ethereal plane that requires no upkeep or maintenance.[542] Yet physical containers that house information – for ideas as well their expressions – are always subject to some form of degradation.[543] Intellectual works cannot be reconstructed if their physical carriers crumble; in Fichte's terminology, the 'form of the thoughts' is *inherently* dependent, and utterly so, on the 'printed paper'.

Archivists and librarians – the foot-soldiers in the preservation of copyrighted and once-copyrighted works – have been keenly aware of this for years, and have largely abandoned in practice the "old archival concept of striving for the 'eternal' carrier".[544] Theories of intellectual

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[538] Langwell, p. 20.
[539] Merges, p. 7. Naturally, the *Golan* decision contravenes this principle.
[540] Merges, p. 142.
[541] Rosen, pp. 162-169.
[542] Dan L. Burk, "Copyright and the New Materialism". In Jessica Lai and Antoinette Dominice, eds., *Intellectual Property and Access to Im/Material Goods*. Edward Elgar, 2016, pp. 44-62, at pp. 46-47.
[543] Jean-Francois Blanchette, "A Material History of Bits". *Journal of the American Society for Information Science and Technology* 62 (2011), pp. 1042-1057.
[544] Schüller 2001, p. 619. See also National Recording Preservation Board, p. 66: "For decades, archivists have harbored hopes of discovering a permanent preservation medium – preservation's own Holy Grail. They have now acknowledged the futility of the quest." The hunt continues in techno-optimistic circles. See Joanna Klein, "If Diamonds Are Forever, Your Data Could Be, Too". *New York Times*, October 26, 2016.

property, by contrast, almost never take this into consideration.[545] Whether it be centuries-old parchment or vellum, rag paper, brittle lignin-plagued sheets, polyvinyl chloride, polycarbonate plastic, or solid-state hard drives, virtually all intellectual objects, in order to be communicated or worked upon, must take some sort of physical shape that will be subject to the vicissitudes of time and space.[546] Some of these will last longer than others, but all will eventually degrade, necessitating transfer to new physical substrates. This transfer, by its very nature, means copying, and the proliferation of copies (both in number and in geographic dispersal) is the most effective means of ensuring continued existence of an information object.[547] Widely distributed works stand much greater chances of surviving to ensuing generations.[548] When works disappear, the expressions *and* the ideas contained within are lost – a permanent shrinkage of the public domain. For many lost intellectual works, understanding even so much as what they were *about* is difficult to reconstruct, since once they have disappeared, there may not be any descriptions of what experience they provided, or sufficient metadata to understand what they contained.

Even if descriptions *do* exist, consider the poverty of reading about a musical work that cannot be experienced directly – that is, experiencing an idea rather than an expression. Take, for instance, the musical works of the composer Giovanni Mazzuoli, who is known for being important enough to have his name, portrait, and space marked out for compositions in the medieval Squarcialupi Codex. Unfortunately, the scribes working on the manuscript neglected to fill out the pages with any actual music. Ten more of his works are known to exist on a palimpsest in another manuscript, but they are too damaged to be recovered.[549] Mazzuoli's works have not survived, and as such are shadows; some things are known *about* them, but the historical record is immeasurably thinner for having lost the actual compositions. Some ethnomusicologists used phonograph cylinders to record performances of the cultures they studied, but used the recordings only as guides for transcription to Western notation – and then destroyed or shaved and reused the cylinders, thinking of the transcription as the definitive document.[550] Subsequent reevaluations of ethnomusicological technique lamented the lost windfall that would have accrued to later generations of scholars had those audio performances been preserved in full, rather than through the much thinner medium of notation. Buddy Bolden,

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[545] Exceptions, virtually alone in the literature, are Zimmerman, esp. at p. 997, and Desai 2008, esp. at p. 105. Bell 2014, at p. 96, uses the word 'preservation', but in context it is essentially a stand-in for the concept of duration.
[546] I am excluding works passed exclusively via oral or gestural traditions, since they do not meet the requirement of fixation required by federal copyright law. However, it is worth noting that some states, including California, confer copyright on unfixed creative works as well (Cal Civ. Code Section 980(a)(1)). These are nevertheless subject to the ravages of memory loss, incompetent transmission, and the deaths of their mental holders.
[547] A common aphorism in audiovisual preservation communities is 'one copy is no copy'. Schüller and Häfner, p. 54.
[548] One application of this principle is the Stanford University LOCKSS system ("lots of copies keeps stuff safe") for electronic journals, which stores materials in a distributed network for future access. National Recording Preservation Board, p. 88; Tsou and Vallier, pp. 475-476; Reese 2012, pp. 297-298.
[549] Frank D'Accone, "Giovanni Mazzuoli". In Stanley Sadie and John Tyrrell, eds. *The New Grove Dictionary of Music and Musicians*. 2nd edition, Oxford, 2001.
[550] National Recording Preservation Board, p. 17; Erika Brady, *A Spiral Way: How the Phonograph Changed Ethnography*. University Press of Mississippi, 1999, p. 62.

the New Orleans jazz trumpeter whose versatility on the instrument remains the stuff of musical legend,[551] was said to have been one of the earliest progenitors of jazz, and was a direct inspiration to early jazz giants such as Jelly Roll Morton and King Oliver (Louis Armstrong's early bandleader). Bolden is thought to have recorded at least one cylinder in the 1890s, but it has never been found, and Bolden went insane in 1907 before he could be recorded any further.[552] We know some things about Bolden's playing style from descriptions given by his contemporaries, and some musical ideas or turns of phrase have been attributed to him, but so many more have been lost along with the expression (assuming it did, in fact, exist). The preservation of this (alleged) cylinder would have been of phenomenal importance to historians of American jazz – and by extension, American culture and world culture, but without it, we are left with mere speculation as to its historical and aesthetic merit.[553] Preserving merely the idea of such works impoverishes human understanding; the map is not the territory, and could not effectively substitute for it. Creators, performers, academics, historians, consumers, educators – everyone in the copyright arena has a stake in shaping both theory and practice in a way that minimizes this sort of erosion of cultural heritage.[554]

The public domain, as populated by limited terms of copyright, refusal of retroactive copyright restoration,[555] fair use copying for preservation,[556] and the use of registration and deposit formalities, serves an additional function rarely taken into account by theorists: it fosters retention of intellectual expressions threatened by extinction. Its concrete benefits are manifold – the proliferation of copies helps ensure access to historically important recordings; it helps maintain the integrity of items on fading technologies; it ensures survival of works that would otherwise disappear. These facets of nonremoval follow from Merges's midlevel principle, and they are benefits that any defense of intellectual property ought to have an interest in sustaining. How should this recognition influence philosophical models? In the following subsections, each of the three established strands of intellectual property defense will be considered in turn, followed by application to species of intellectual property other than copyright.

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[551] See e.g. Catherine Welch, "Two Films Unveil a Lost Jazz Legend". NPR, December 15, 2007. Available at < http://www.npr.org/templates/story/story.php?storyId=17260407 >.

[552] J. Bradford Robinson, "Buddy Bolden". In Barry Kernfeld, ed. *The New Grove Dictionary of Jazz*. 2nd edition, Oxford, 2002.

[553] Of course, it is entirely possible that Bolden never recorded, and that the existence of this cylinder is but a myth. Ultimately, though, this is immaterial to the example; the real question is counterfactual – not about whether it actually existed, but what the result would be if it *had*.

[554] Parallels can be drawn here between intellectual property easements for preservation and international agreements forbidding wanton destruction of cultural property during wartime. Mergesian ideas of nonremoval are analogously applicable. See Jiri Toman, *The Protection of Cultural Property in the Event of Armed Conflict*. UNESCO, 1996; and Wayne Sandholtz, *Prohibiting Plunder: How Norms Change*. Oxford, 2007.

[555] The Supreme Court held in *Golan v. Holder* (2012) that retroactive restoration of copyright is constitutional. See Alex P. Garens, "Will Copyrights Expire in 2019? Revisiting the Copyright Clause: 'Limited Times' and Copyright Term Extensions in the Wake of *Golan*". *Wake Forest Journal of Business and Intellectual Property Law* 13 (2012), pp. 1-37, at p. 19.

[556] James Boyle has argued that fair use ought to be generally available in order to "maintain[] the availability of a public domain for future creators." Boyle 1996, p. 131.

A. Utilitarianism

Utilitarian theory is perhaps best equipped to handle this worry, which is unsurprising, since the problem is predicated upon a litany of bad consequences. Progress in the arts and sciences cannot be ensured if society does not keep a repository of works on which to build and from which to learn. Given the imminent decay of many materials, this justifies shorter terms and broader scope to allow for preservation by proliferation. One could conceive of this as taking the discount theory of economic value and applying it to the physical decay of materials, as well.[557] On this view, inaction carries a cost, and the likelihood of loss needs to be factored into any calculus of justification.[558] Furthermore, preservation is inextricable from access; restrictive access policies motivated by copyright inhibit the accessibility of cultural works in socially disadvantageous ways, contributing to those works' negligence and disappearance.[559]

Utilitarians might counter that perhaps society should simply discard what is found to be worthless and keep only what is worthwhile. Perhaps, on balance, allowing authors full control over their works encourages them to invest in preservation and maintenance only of the best works, as chosen either by creators themselves or in negotiation with audience demand and appreciation. Some valuable individual works, then, might be sloughed off from social memory, but for the utilitarian, the loss is likely to be minimal against the backdrop of what remains. This could be fashioned into a defense of long-term or even perpetual copyright, ensuring that only the cream that rises is skimmed and consumed by the citizenry for the sake of continuous human betterment or flourishing. Yet why should it be assumed, from a utilitarian standpoint, that authors are generally in the best position to decide for the rest of society what has lasting value and what merits the culture's enduring attention? Authors (or, more precisely, rightsholders) may be – are, in fact, *likely* to be – blinkered in their perceptions of the long-term worth of works, even (perhaps *especially*) those they have direct control over.

Furthermore, it is practically a trope that 'lost treasures' sit idly in archives or basements, forgotten by their creators (and the rest of society), waiting to be rediscovered. Entire wings of the entertainment industry rely on this trope, including record label reissuers. The routine rediscovery of forgotten gems that provide new aesthetic or political understandings of past or current times puts the lie to any claim of utilitarian cultural Darwinism. Even materials that modern creators (or audiences) might *want* to discard can still have important value that merits their retention. Factually incorrect works can be enlightening to historians, demonstrating common misunderstandings of earlier times. Banal musical compositions, aesthetically lackluster

[557] See Landes and Posner 2003, p. 476.
[558] For a look at this viewpoint internally to heritage institutions, see Chris Lacinak, "The Cost of Inaction: A New Model and Application for Quantifying the Financial and Intellectual Implications of Decisions Regarding Digitization of Physical Audiovisual Media Holdings". *IASA Journal* 43 (2014), pp. 9-18.
[559] "The perception that recordings held by [library and archival] institutions are unlikely to be accessible (even if properly stored and physically protected) discourages the deposit of collections with institutions and is detrimental to cultural conservation….Collections in greater need of preservation may not receive funding support if they are to remain unavailable for off-site listening once preserved." National Recording Preservation Board, p. 119.

arrangements, or incompetent performances can still provide humor, materials for audio collage and remixing, or insight into compositional and music-educational practices. Ethically objectionable works, too, serve important historical and educational purposes; removing them from public access (or allowing them to decay to nothingness) might be couched as a sort of *damnatio memoriae*, a benevolent censorship for the sake of moral progress, but it would tell lies about the human past.[560] The point to be taken here is not that *everything* in the world must or should be saved, but merely to show that it is far from transparently obvious that any easy utility assumptions can be made about the low value or character of items threatened by loss.[561]

Is it better to forget the past and simply start fresh? Perhaps discarding old works frees mankind from the shackles of "obeisance to an encumbering past",[562] allowing each generation to make itself anew. There is a rich strain of intellectual thought stretching back centuries that upholds the value of loss, decay, ruins, destruction, and amnesia. Perhaps the most famous standard-bearer of historical iconoclasm is Friedrich Nietzsche, who claimed that paying too much attention to the past stunts the minds of the living, trumpeting ancient glories while sabotaging present ones.[563] José Ortega y Gasset remarked in a 1934 speech on the "torrential abundance" of "useless and stupid" new books; "their existence and their conservation", he held, "is a dead weight upon humanity which is already bent low under other loads."[564] Modernist and Futurist movements in the twentieth century echoed these sentiments, calling for the tearing down of the past to enable the future.[565] Decay was aestheticized by the Romantics, who saw beauty in ruins, and thinkers of prior generations saw in the crumbling of all things lessons to be learned of the dangers of hubris and the inevitable judgment of the sinful.[566] Visibly (or audibly)[567] destroyed human works can have value by serving as a type of *memento mori*, a persistent reminder of our own mortality; from a utilitarian standpoint, perhaps this spurs us to make the most of what little time we are afforded in mortal flesh.

Yet such a sweeping conclusion seems to ignore the countervailing benefits that surviving past works provide. Santayana's famous aphorism,[568] for one, suggests utilitarian benefits are a doubtful outcome of historical obliteration; a society that does not recall its past

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[560] An example is the quiet deaccessioning, by every library in the United States, of a treatise on eugenics and euthanasia that had been employed by Nazi scientists to legitimate mass murder of the disabled and mentally ill. Nicholas A. Basbanes, *A Splendor of Letters: The Permanence of Books in an Impermanent World*. HarperCollins, 2003, pp. 216-219.
[561] David Lowenthal notes, not without some irony, that "[v]irtually any old thing which twenty years ago would have been junked today finds a place both in popular history and in collectors' hearts." Lowenthal 1985, p. 389.
[562] Lowenthal 1985, p. 379.
[563] Friedrich Nietzsche, "On the Uses and Disadvantages of History for Life". In *Untimely Meditations*. Cambridge, 1984 [1874], pp. 57-124.
[564] Quoted in Basbanes, pp. 329-330.
[565] Lowenthal 1985, pp. 379-381.
[566] Lowenthal 1985, pp. 173-182.
[567] William Basinski, *The Disintegration Loops*. 2062 Records, 2002-2003.
[568] "Those who cannot remember the past are condemned to repeat it." George Santayana, *Reason in Common Sense*. Scribner, 1905, p. 284.

missteps may be less well prepared to prevent their recurrence. Surely, at the very least, affording ourselves (and future individuals) as full a range of choices as possible about what to keep and what to discard is preferable to leaving those choices to the random destruction of nature (or, for that matter, to the recklessness of pillagers). Even librarians and archivists discard most of what they are offered, either out of sheer poverty of resources or based on considered judgment that the items are not likely to be of sustained value to future researchers, but they inevitably choose based on perceived value to (sectors of) current society, since future conceptions of value are opaque. In general, it is far more likely that we will rue what works we have lost than that we will be sorry we saved the works we did. The world's keepers of culture may use whatever value system they believe most defensible to select what is preserved; evaluating these value systems definitively is beyond the scope of the present document. A utilitarian philosophy of copyright would hold that the law should not actively hobble the preservation of works adjudged to be of enduring worth, regardless of which value theory was used to assess that worth. Put slightly differently, copyright should not be the mechanism by which we determine what is and is not to be preserved for posterity.

B. Lockean Theories

The ephemerality of cultural works integrates seamlessly into Lockean intellectual property theory, though this is rarely recognized by its major proponents. It is a classic instance of *waste*, which Locke identifies as a justification for limitations on property claims. Locke notes in the Second Treatise, "As much as any one can make use of to any advantage of life before it spoils, so much he may by his Labour fix a property in: whatever is beyond this, is more than his share, and belongs to others. Nothing was made by God for man to spoil or destroy."[569] Locke himself addressed the stifling of access to culture through intellectual works. In a 1694 memorandum concerning the possible renewal of the Stationers' Company printing monopoly, Locke inveighed against the shoddy quality and high prices of their publications in comparison to import Dutch editions, and lamented how the Stationers' privilege kept older works out of print: "by such titles as these, which lie dormant, and hinder others, many good books come quite to be lost."[570] Following Lockean thinking, if the metaphor between physical and intellectual property is applicable, then intellectual goods, as much as tangible ones, will be subject to Locke's limitations on leaving 'enough and as good', and avoiding waste. Thus, a

[569] John Locke, *Second Treatise of Government*, Chapter V, § 31.

[570] Hughes 2010, p. 565. Hughes's article includes the full text of the memorandum. Locke implies in the document that natural rights may hold for intellectual works, but supports durational limits. Locke was particularly incensed at the monopoly on printing of ancient authors, which he called "absurd and ridiculous" and "unreasonable and injurious to learning". The document is not a major work of Locke's, and some of its invective may have been indirectly meant to subvert the censorship that would have come along with a renewal of the Stationer's privilege (p. 557). Nevertheless, it is consistent with his previous attempts in practice to reduce the power of the Stationer's company in controlling works with value to scholars like himself. Seana Valentine Shiffrin, "Lockean Arguments for Private Intellectual Property". In Stephen Munzer, ed. *New Essays in the Legal and Political Theory of Property*. Cambridge, 2001, pp. 138-167, at p. 155. See also Lior Zemer, "The Making of a New Copyright Lockean". *Harvard Journal of Law & Public Policy* 29 (2008), pp. 891-947, esp. at pp. 900-905.

prima facie assertion may be made: when intellectual goods are, due to low population or degrading physical carriers, under imminent threat of disappearance, but are held under a system of copyright that prevents their preservation, a kind of spoilage occurs. The loss of intellectual works through processes of degradation and obsolescence is a species of waste that may limit or call into question rightsholders' claims to property or exclusivity.

While Locke's proviso requiring 'enough and as good' is sometimes seen as incorporated into legal practice through mechanisms such as the idea-expression dichotomy and fair use, the concept of waste has no representation in American copyright law,[571] and the very possibility of it is routinely dismissed by intellectual property theorists – even those who discuss Lockean concerns. Adam Moore, for example, simply remarks, "intellectual property cannot be destroyed".[572] Robert Merges, too, misses the mark in his discussion of the waste proviso, averring, "intangible assets do not literally rot or spoil".[573] Intellectual works fixed on physical substrates are, on the contrary, *always* rotting, perhaps slowly, but nevertheless surely. Michael J. Madison states that a "work of authorship never degrades from overuse…[a]t some level, intangible knowledge forms simply exist, once they have been created, and notwithstanding the fact that those forms evolve over time."[574] According to Peter Drahos, "Abstract objects are not consumed in use. In one sense they never leave the intellectual commons."[575] Edwin Hettinger addresses waste, but sees it essentially as an extension of the property of nonrivalrousness – a matter of inherent socioeconomic inefficiency.[576] Justin Hughes posits that ideas, in and of themselves, are not perishable, and considers possible counterclaims: "ideas go stale, new stories become 'old', literature becomes dated… [yet] there is no internal deterioration in the idea and the loss in value is seen only against a social backdrop."[577] Hughes makes note that certain social values can degrade over time, but the ideas that form their bases are treated as if they are as permanent as the precious metals Locke uses to replace perishable goods in a money economy – "some lasting thing that men might keep without spoiling".[578] "It is difficult", Hughes concludes, "to think of any other ways in which intellectual property schemes embody any notion of the non-waste condition. Patents, copyrights, and trade secrets are all recognized whether or not the owner is squandering or has shelved the idea."[579] The evanescence of creative works' substrate materials provides just such a scenario. Lockean justifications that make no mention of this

[571] Patry discusses waste only in an economic sense (of under/overuse) and only in the context of joint ownership of copyright: "Co-owners of copyright do not owe each other a duty not to 'waste' or 'deplete' the copyright. These are real property concepts inapplicable to copyright…one cannot distinguish between a copyright co-owner's efforts to vigorously exploit the work and 'over exploiting' which theoretically might lead to depletion of a copyright's economic value." William Patry, *Patry on Copyright*. Thomson Reuters, September 2016, § 5:10.
[572] Moore 2001, p. 139.
[573] Merges, p. 56.
[574] Madison, p. 1992.
[575] Peter Drahos, *A Philosophy of Intellectual Property*. Ashgate, 1996, p. 50.
[576] Hettinger, pp. 44-45.
[577] Hughes 1988, p. 328.
[578] Locke, Chapter V, §§ 45-46.
[579] Hughes 1988, p. 329.

inevitability may serve to buttress overly strong claims about intellectual property law and policy in a world where copyright control outpaces technological obsolescence.

A few theorists touch upon Lockean considerations of intellectual waste, employing the term primarily in a metaphorical sense. Adam Moore suggests that the loss of potential future value of an intellectual work can create a tragedy of the commons, a waste-like scenario; for Moore, such a tragedy is manifest when intellectual works are not created or disseminated due to insufficient copyright protection.[580] Peter Drahos reconsiders his earlier view by asking, "Might not ideas (one form of abstract object) spoil? As abstract objects ideas cannot spoil, but the opportunities they confer may….Perhaps ideas can spoil in the sense that, once appropriate, their time span of useful application in many cases is limited. Those who appropriate ideas with a view to doing nothing with them arguably infringe Locke's spoilage proviso."[581] Merges returns to the issue of intellectual waste and finds it manifest in cases where property rights "cover an excessive range of works", such that "too many of the potential embodiments covered by the property right will never be built, made, or implemented."[582] Carys Craig analyzes waste as part of a general rejection of Lockean theory, and suggests several ways in which waste could be said to manifest in social underuse and withholding of beneficial ideas from the public.[583] Yet she, too, alleges, "[w]ritings, songs, or films do not spoil in the way that an unused basket of plums might. In that sense, one could say they are non-perishable."[584] Wendy Gordon inches closer to the material dimension of intellectual waste, suggesting that the waste restriction "might restrict a misanthropic inventor of a cure for cancer from destroying her notes", but says little else on the subject.[585] Lior Zemer finds waste in the blurriness of the idea-expression dichotomy, foregrounding the difficulty of extracting ideas from expressions. If protections for expressions are overly long in duration, they encroach upon protection of ideas, which serves to spoil those ideas, in the sense of squandering their social value as time and culture move on from the concerns the work spoke to at the time it was first expressed.[586] He also notes that the overprotection of expressions adversely affects the creation of subsequent derivative works, yet falls short of considering material degradation per se.[587]

Seana Valentine Shiffrin, expanding on the cultural notion of waste posited by scholars such as Drahos and Hughes, notes, "intellectual products…are not immune from spoilage or waste. The value of information may be time-dependent…if such information is hoarded, it may 'spoil' or become useless. Some software programs may be useful only in combination with current hardware technology. Other intellectual products may be more useful at particular times

[580] Moore 2001, pp. 139-140. Moore does not address waste explicitly.
[581] Drahos, p. 51.
[582] Merges, pp. 58-59.
[583] Carys Craig, "Locke, Labour and Limiting the Author's Right: A Warning against a Lockean Approach to Copyright Law". *Queen's Law Journal* 28 (2002), pp. 1-60, at pp. 31-34.
[584] Craig, p. 31.
[585] Gordon 1993, p. 1551.
[586] Zemer, pp. 923-925.
[587] Zemer, p. 933.

– when, for instance, they draw upon or react to current events or contemporary culture."[588] Shiffrin examines Locke's presumption of an initial commons and his limitations on appropriation and exclusivity, and, in applying them to intellectual goods, finds that, with some important exceptions,[589] strong copyright controls subvert the limiting provisions, creating social wastes in the form of underuse. Underuse alone, however, seems a weak claim against natural rights to control; mere underuse of physical goods does not ipso facto justify repossession, except perhaps in communist or communitarian traditions.[590] Moreover, it insufficiently describes the problem of ephemerality, which does not result merely in underuse, but in total extinction of *any* possible use. In the same volume in which Shiffrin's essay appears, property theorist Edward J. McCaffery discusses waste's application to tangible and financial goods, and distinguishes two uses of the word 'waste': nonurgent and dissipatory.[591] The former refers to the underuse of valuable or scarce resources – what we might identify either as antisocial consumption or merely as submaximal use of assets (in a more utilitarian framework). The latter is wreckage – waste in the form of "destruction of a permanent physical asset".[592] Shiffrin's concerns speak to nonurgent waste; the stifling of concurrent use, the benefits of mutual contemplation and open discussion, the short shelf life of intellectual works that comment upon the new or the fashionable.[593] These provide possible grounds for limitations based in liberty or freedom of speech and access to information, both of which would concern the Lockean from a more holistic view of intellectual property's effect on the political organization of society. Effectively, the problems of degradation and obsolescence add to Shiffrin's list the stronger claim of dissipatory waste as well; strong copyright also contravenes Lockean theory by enabling physical ruination of intellectual works on noteworthy scales.

Benjamin Damstedt developed a theory of Lockean waste built out of the economics of intangible objects. Damstedt asserts that waste, defined as unused products of labor, is essentially absent from tangible goods transactions, because, as Locke notes, perishable goods may be converted to nonperishable money, permanently capturing their value, and laborers will limit their production of spoilable goods to what they can reap in exchange for money in the marketplace. For intangible goods, production is essentially infinite, with infinitesimal marginal cost per unit; this creates a market failure where, in order to protect their own self-interest and charge a price for the intangible work, creators must necessarily generate waste by refusing to

[588] Shiffrin, p. 140.
[589] E.g., unfinished works and private works such as diaries and letters. Shiffrin, p. 157. However, almost no published, promulgated, or distributed works would fall into this category. Shiffrin, p. 165.
[590] Shiffrin continues with an argument based in non-rivalrousness to differentiate physical from intellectual goods, though under many (neo-)Lockean accounts, this feature of intellectual goods is ultimately immaterial to the validity of authorial rights claims. See, e.g., Moore 2012, at pp. 1091-1093.
[591] Edward J. McCaffery, "Must We Have the Right to Waste?". In Stephen Munzer, ed. *New Essays in the Legal and Political Theory of Property*. Cambridge, 2001, pp. 76-105, at p. 77.
[592] McCaffery, p. 77.
[593] Shiffrin, p. 156.

sell some of the copies made.[594] Damstedt argues that this justifies a vastly expanded right of fair use, asserting that it would be permissible for anyone not willing to pay the market price established by creators to freely copy and use the work.[595] Yet Damstedt's definition of waste seems to be limited to economic underutilization; under his theory, unused intangible goods are considered wasted even if they do not thereby lose their social value. This leads him to the improbable conclusion that, under a Lockean property regime, everyone who did not wish to pay for an intangible good at the creator's asking price would be morally entitled to copy and use that good for free. Furthermore, his conception of waste works only for intangible goods; for tangible goods (and for tangible copies of intangible goods), no spoilage occurs, at least in principle, because the market irons out underuse concerns through pricing mechanisms. Dissipation or wreckage of scarce tangible copies of intangible goods has no place in Damstedt's theory.

Perhaps the most thorough analysis of the Lockean limitations vis-à-vis intellectual property is made by Gordon Hull, who describes Locke's theory of property rights as a means of optimizing, and enriching, the benefits of the (divine) grant of the commons. Hull defines waste in the Lockean sense as that which "happens when the product of labor that could improve somebody's life is allowed to irrevocably lose its value before it actually does so."[596] Locke's fundamental concern, Hull explains, is for the value in the object, rather than the object itself. The application to intellectual goods can be illustrated by two examples. A copy (physical or digital) of a now-destroyed physical item – say, the letter Johann Sebastian Bach sent to the Elector of Saxony on July 27, 1733 – preserves the value of an intellectual object, even though the object itself no longer exists. The manuscript copy of this letter was destroyed in the firebombing of Dresden in February 1945, but its text, providing insight into the composition of what would later come to be known as the Mass in B Minor, had been reprinted in full many times, thus preserving its (intellectual, if not its full evidentiary) value.[597] Conversely, a CD-R left in the sun still exists, but its intellectual content has been irretrievably destroyed by fading of the dye used to fix the data; it has lost its intellectual use (except perhaps as a Frisbee, or a prop for a cautionary tale). Thus, Hull infers, "the conceptual issue is not the loss of the object, but the loss of all possible *use* of the object."[598] But this is not sufficient to get to Locke's meaning; Hull continues, "[i]t is not just that the product does not get used, but that property claims get in the way of its use",[599] as they do in the case of overly long copyright terms where provisions for preservation are not robust. He concludes that Lockean spoilage occurs when three conditions all hold: demand irreversibly cannot be met, the capability to meet those demands is present in

[594] Benjamin Damstedt, "Limiting Locke: A Natural Law Justification for the Fair Use Doctrine". *Yale Law Journal* 112 (2003), pp. 1178-1221.
[595] Damstedt, p. 1201.
[596] Gordon Hull, "Clearing the Rubbish: Locke, the Waste Proviso, and the Moral Justification of Intellectual Property". *Public Affairs Quarterly* 23 (2009), pp. 67-93, at p. 79.
[597] Hans-Joachim Schulze, "Documents". In Robin A. Leaver, ed. *The Routledge Research Companion to Johann Sebastian Bach*. Routledge, 2016, p. 32.
[598] Hull, p. 80.
[599] Hull, p. 81.

extant goods, and claims of property thwart the use of those goods to meet demand. Hull's example of irrevocably unmet demand is strikingly apropos to sound recordings:

> If there is no demand for a good, then there is no possibility of wasting it. Locke seems to think that, as a matter of fact, such a situation would never occur, but it makes enough sense in economic terms: if no one assigned any value whatsoever to the work of a once famous recording artist, then the price the record company asked for it would be of no concern. Even here, one should be careful, since if there is potential future demand (perhaps archivists, or a decade-specific revival), then it would clearly violate the spoilage proviso to destroy all possible copies of the recording (the master, computer files, all existing copies, etc.)[600]

Merges took Hull to task for defining spoilage too broadly, by basing it on unmet *demand*; Locke's conception of waste is instead "a thing that has been appropriated and then put to no productive use at all."[601] This is a necessary adjustment, but Hull's example actually fits that definition implicitly; it is the intellectual property analogue to Merges's example of "if an absurdly wealthy person were to buy the entire output of the Maserati factory for a given year, and then let the cars sit unused in a warehouse for several hundred years or so until they are unusable."[602] Both Hull and Merges speak of willful or wanton destruction without regard to the potential for spoilage, but that destruction need not be intentional to qualify as waste in line with Locke, if that destruction is nevertheless causally linked to property rights. Thus, Hull's claims can be adjusted, and then extended. A Lockean spoilage occurs when all productive use of an intellectual good is extinguished, the capability to extract that use prior to extinguishment was sought by an interested party, and claims of property thwarted the extraction of that value. If copyright grows strong enough (through a combination of duration and scope) that intellectual works held on fragile and obsolete media become permanently unusable (whether via intention or inaction), preservation concerns provide a credible and substantial Lockean limitation on exclusive rights so granted.[603]

Hull's argument bucks the general trend of Lockean thinking, which often assumes maximal property rights accrue to laborers.[604] Strong Lockean theorists might object to Hull's application of spoilage to the total supply of ideas or intellectual expressions available to mankind. In an inversion, of sorts, of the utilitarian non-rivalrousness argument, some Lockeans claim that the proviso of 'enough and as good' and the limitation on spoilage militate in intellectual property's favor, perhaps even more strongly than with physical objects, because intellectual works are not part of any preexisting natural commons or finite supply. As Kenneth Einar Himma has argued, intellectual works, especially copyrighted works, would not necessarily come into being without the work of specific agents; "it is not true that someone else

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[600] Hull, p. 81.
[601] Merges, p. 57.
[602] Merges, p. 57.
[603] Hull also identifies the DMCA anti-circumvention provisions as an example of Lockean overreach, since they can contain, and criminalize access to, public domain documents. Hull, p. 82.
[604] "Locke is commonly brandished as a rhetorical emblem for property schemes that he himself would have scorned." Boyle 2008, p. 262. The idea is developed further by Zemer, at pp. 892-898.

would have written *A Tale of Two Cities* had Dickens not done so."[605] Himma continues, "The intellectual commons, unlike the land commons, is not a resource already there waiting to be appropriated...; it is stocked by and only by the activity of human beings."[606] Unlike land or other physical items, there is no conceivable limit to the number of intellectual creations that people can conceive, and therefore no reason one cannot substitute some other creation of one's own fashioning. James W. Child notes, "there is an infinite (or indefinitely large) number of new ideas that can be thought of and, thus, created (or discovered) and appropriated *ex nihilo*, merely by hard (and creative) thought. I do not have to pay anyone for those new ideas and…when I come up with one, the number available to you is not thereby decreased…so long as you remain able and willing to exert mental labor."[607] By this rationale, no denial of 'enough and as good' and no spoilage can be claimed if one refuses to keep an intellectual work available to the public.

There are three problems with this analysis. First, it implies that the information commons rightfully consists only of ideas, and not works – if, indeed, it even consists of ideas.[608] The assumption seems to be that, if the world were properly Lockean, there would never have been any proprietary works to fall into the public domain (other than by declaration), and only ideas (and perhaps some number of freely granted works) would exist in a putative commons. An even stronger Lockean view could allege that, since all ideas must be discovered or generated by a process involving (intellectual) labor, even these, in principle, could be subject to propertization.[609] On this view, the idea of the commons itself would simply be inapplicable to intellectual entities. Certainly, such a regime would be immensely constricting to human freedom, and even a system with no works in the commons would make the crafts of history and artistic creation profoundly difficult tasks. Second, to the extent that the analysis permits of expressions in an information commons, it fails to recognize that works are, by definition, unique; they are not ultimately substitutable for one another in the way Locke's examples of acorns and fresh water are.[610] At times, one work may be as good as another in fulfilling some particular function, but there are myriad circumstances – personal, sociopolitical, historical, documentarian, evidentiary – under which a specific intellectual work serves some end that no other work could. The entire doctrine of parody fair use is an example; parody must make use of the expression because it would be unable to make its point without that use. Preservation of works is, in all cases, a prerequisite to continuing use of the work. This suggests that excessive

[605] Himma 2008, p. 1150. See also Drahos, pp. 48-49.
[606] Himma 2008, p. 1150.
[607] James W. Child, "The Moral Foundations of Intangible Property". *The Monist* 73 (1990), pp. 578-600, at p. 589.
[608] At least seven possible conceptions of the information commons have been proposed – the universe of facts, the set of communicative tools (languages) in human use; cultural heritage in the public domain; and four different articulations of sets of ideas. Fisher 2001, p. 186.
[609] Drahos, pp. 48-49.
[610] Craig, pp. 24-25. Craig's statements on uniqueness are part of a larger attempt to dismantle Lockean intellectual property theory entirely, but the insight highlighted here can be incorporated into Lockean thinking without any need to abrogate it completely.

property claims in *some* intellectual works can be limited on preservation grounds even by Locke's 'enough and as good' proviso, in addition to the waste limitation.

Third, the analysis fails to differentiate between works that have not yet been made available to the public and those that have already been delivered into the world. If an idea (or a work) has never been released to the public, and its creator destroys it or allows it to fall to ruin, it may be reasonable for that creator to claim that the rest of the world is no worse off. As Lior Zemer has noted, to compel divulgation of such intellectual objects would be tantamount to forced speech.[611] By contrast, works that have been promulgated in some way (say, via publication, public performance, or broadcast)[612] are now part of the experiences of people who have consumed them – people who make use of them for entertainment, well-being, speech, commentary, education, and mutual human understanding.[613] Failure to salvage them for later use, or even to allow the audience the possibility of doing so for future reference, would result in both a physical waste (the goods themselves) and a social waste (the loss of collective memory associated with those goods that is engendered by excessive restrictions preventing their preservation). Lockean-style intellectual property rights protect products of the author's minds, as extension of their labor; it does not follow that they abrogate consumers' rights to protect their *own* minds and personal histories. At its extreme, to do so would give rightsholders near-total control over the histories of many entertainment industries.[614] If they chose not to preserve vast tranches of this material, it would surely be absurd on its face to claim that it would be preferable for it all to disappear under the presumption that unauthorized preservation is a morally impermissible infringement on the natural rights of creative laborers. If this is an inevitable consequence of (neo-)Lockean intellectual rights arguments, they seem likely to create a world no Lockean would actually want to live in, certainly not one who valued liberty of thought and expression as well as (intellectual) property.

My argument here follows closely upon Merges's Prodigious Waterbearer argument, a variation on a theme by Wendy Gordon.[615] The argument was first articulated in essentially

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[611] Zemer, p. 923, critiquing Craig, at p. 33.

[612] Since public accessibility is accomplished in so many different ways, the simplistic published/unpublished dichotomy in law fails to capture the distinction I am making here adequately. Patterson and Lindberg, p. 214. Certainly, a publicly performed work that has not been offered for sale would qualify, as in *Ferris v. Frohman*, 223 U.S. 424 (1912). Kaplan, pp. 84-85.

[613] Craig, p. 26.

[614] Rightsholders already do this, by recalling from the market works that paint them in unfavorable light; *Song of the South* is out of print in the United States to this day. Jason Sperb, *Disney's Most Notorious Film*. University of Texas Press, 2012, pp, 200, 229-230. Another example is the editing of portions of works deemed unsavory. A musical example is Michael Jackson's "They Don't Care About Us", in which the lyrics "Jew me, sue me, kick me, kike me" were replaced with "do me, sue me, kick me, strike me". Dinita Smith, "Jackson Plans New Lyrics for Album". *New York Times*, June 23, 1995. Taylor Swift quietly replaced the lyric following "So go and tell your friends that I'm obsessive and crazy" in "Picture to Burn" from "that's fine, I'll tell mine you're gay" to "that's fine, you won't mind if I say". Jenna Mullins, "45 Things You Didn't Know About Taylor Swift Songs". *E! News*, November 13, 2014. Available at < http://www.eonline.com/news/596115/45-things-you-didn-t-know-about-taylor-swift-songs >.

[615] Merges, pp. 52-55; see also Gordon 1993, pp. 1566-1568.

Lockean terms,[616] but its general applicability as a midlevel principle is manifest. "Original creation…can shift the baseline. The creator's contribution adds so significantly to what was there that it is wrong to permit the creator to pull back what he or she contributed, to remove it from circulation."[617] Under this theory, those who make use of cultural works, like those who become accustomed to a large and robust lake, are deprived if a prodigious bearer of water suddenly decided to shut the pipes off and withdraw the water contributed to date. They "have come to count on the lake as they know it – to *rely* on it retaining the shape and depth they have known."[618] Merges applies it principally to works attaining canonical status within the culture, and tempers the argument considerably for less-used works: "Most contributions to culture are more like isolated drops in the lake. Removing them, by asserting IP rights over them, would barely cause a ripple."[619] This deserves reconsideration in the face of the sizable number of works on decaying media, still protected under copyright, which serve as primary-source witnesses to history, aesthetics, and social life. In an important sense, these, too, are contributions to the lake, and they need not be feted as canonical or be beloved by millions in the culture to be recognized as valuable documents in and of themselves. In aggregate, and taking the long view, they constitute the bulk of human knowledge and culture.

The line of reasoning advanced here would not, prima facie, override the inherent Lockean right of creators to protect their interests prior to promulgation. Excepting scenarios where human lives are overtly at stake, e.g., a trade-secret cure for cancer,[620] unpromulgated works (works unpublished and not performed or broadcasted publicly) could reasonably be said to have stronger claims against Lockean waste, since they have not entered into the public consciousness.[621] Lockean property claims for at least one's lifetime are strongest for these classes of intellectual goods – Shiffrin's examples of unfinished drafts (of living authors), private letters, and personal secrets would all fall under much stronger presumptive claims against unauthorized preservation. (Most trade secrets would also fall into this category.) However, many unpublished works in danger of erosion were never intended by their creators to *remain* unpublished, and most were never explicitly identified as works meant to be kept private from

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[616] And has been challenged on Lockean terms. Adam Moore has countered that this baseline problem occurs only when beneficial materials are foisted on people; if the imbibers freely consent to the risky terms of the waterbearer's contract, they cannot say they have been harmed by a sudden withdrawal. Yet predatory contracts are routinely regulated by the state. Justifiable regulation may occur by, e.g., implementing a copyright system regularizing the terms of exchange between artists and audiences, and ensuring audiences basic rights (which might include, for instance, freedom in time, place and manner of personal use; fair use; first sale; and copying for personal use) for the sake of fostering education and improving the quality of civic life. See Moore 2012, pp. 1085-86.

[617] Merges, p. 53.

[618] Merges, p. 53.

[619] Merges, p. 55.

[620] Himma 2008, p. 1156; Gordon 1993, p. 1551.

[621] A similar line of reasoning was articulated in *Harper & Row v. Nation Enterprises*. "Under ordinary circumstances, the author's right to control the first public appearance of his undisseminated expression will outweigh a claim of fair use." *Harper & Row v. Nation Enterprises*, 471 U.S. 539 (1985), at p. 555. This also comports strongly with the moral right of divulgation – perhaps a point of Mergesian midlevel consensus on the principle of dignity.

the wider world. Indeed, much of this material exists in only a single copy – often in a library or archive, or the hands of a private collector – and so preservation concerns for such works would likely be correspondingly stronger against a presumption of authorial control.[622]

C. Personality Theory

Personality-based theories of intellectual property pose the greatest impediment to the philosophical reorientation I am advocating. Arguments based in the bad consequences of degradation and obsolescence wilt in the face of the simple assertion that content creators have a morally protected interest in the intellectual embodiments they produce.[623] Any sort of appeal to consequence, for a personality-based theorist, cannot justify a limitation of rights. Under the personality doctrine, then, authors and creators – whose natural rights in their creations are a claim against the world – would seem to have the strongest defense of control even in the face of possible destruction of their own works. Indeed, one of the moral rights now afforded to creators in some European countries is a right of withdrawal, allowing an author to remove a work from publication and distribution – essentially calling for its destruction, sanctioned by law. In France, for instance, this can be invoked against digitized versions of out-of-print works authors believe would harm their reputations.[624] In some countries, even restoration of decaying visual artworks has been interpreted as a possible moral rights issue, since it "substitutes a new work for the original and imposes an unwanted collaboration on the original author."[625]

However, several countervailing arguments may be advanced here. The right of withdrawal is by declaration, and most of the works in imminent danger of disappearance are not being withdrawn through the overt intention of the author; more often, it is due to sheer accident

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[622] An example of this in practice is the implementation of the 1992 amendment to the Copyright Act, which followed on the heels of *Salinger v. Random House, Inc.*, decided soon after *Harper & Row v. Nation Enterprises*. The decision in *Salinger* stated that unpublished works "normally enjoy complete protection against copying any protected expression", even fair-use copying. *Salinger v. Random House, Inc.*, 811 F.2d 90 (2nd Cir. 1987), at p. 97. In the wake of *Salinger*, publishers feared that any historical or biographical usage of unpublished works might be found to be infringing, and so language was added to the fair use section of the Copyright Act stating, "The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors." Daniel E. Wanat, "Fair Use and the 1992 Amendment to Section 107 of the 1976 Copyright Act: Its History and an Analysis of Its Effect". *Villanova Sports & Entertainment Law Forum* 1 (1994), pp. 47-66. While donor agreements for unpublished archival material frequently prevent widespread dissemination of the contents, usage of unpublished works for purposes of preservation may (and I would argue should) in some cases qualify as fair as well; there is no reason for archives to collect materials they would be legally or contractually prevented from preserving.

[623] Himma 2008, p. 1152.

[624] Baldwin, p. 35.

[625] Baldwin, p. 32. Restored works can also sometimes qualify for derivative work protection, which results in some public-domain works reentering copyright in their restored forms. Andreas Rahmatian, "Copyright Protection for the Restoration, Reconstruction and Digitization of Public Domain Works". In Estelle Derclaye, ed. *Copyright and Cultural Heritage*. Edward Elgar, 2010, pp. 51-76. CBS was recently successful in asserting copyright over remastered pre-1972 sound recordings in a district court decision. Eriq Gardner, "CBS Beats Lawsuit Over Pre-1972 Songs with Bold Copyright Argument". *The Hollywood Reporter*, June 1, 2016. Available at < https://www.hollywoodreporter.com/thr-esq/cbs-beats-lawsuit-pre-1972-898633 >.

or ignorance.[626] It is likely that the vast majority of authors would have a stake in not seeing their works disintegrate. If intellectual creations are valuable expressions of an author's own thought and spirit, it seems natural to assume this is predicated upon their continued existence as entities.[627] There are, of course, postmodern creators who romanticize decay and fashion art with the explicit intent of having it degrade to nothingness.[628] Yet this conflicts rationally with personality-based commitments to the integrity of the work as an extension of one's creative individuality; degradation is, at least in some sense, inherently injurious to one's reputation, since it reduces the robustness of that reputation.[629] Insofar as an artist cultivates degradation to prove a point, capturing that point almost inevitably involves the creation of some sort of persistent derivative work to fully and accurately describe it (photograph, video, or detailed written account).

Additionally, personality theorists here, as elsewhere, must confront the issue of alienation. Most copyrights that might pose existential threats to creative works are not held by the person whose personality is tied to the work. In other cases, the author cannot be found or is unknown; these *orphan works* are presumptively held under copyright but unable to be copied or publicly shown outside of fair use.[630] The orphan works problem has been greatly exacerbated by personality-based removal of registration formalities, since works are now much harder to trace than they were when at least some publication or registration information was routinely available.[631] Author-centered copyright regimes of the sort mandated by the Berne Convention have thus made preservation of that author's works much harder from a legal standpoint – especially when coupled with very long terms, which multiply the difficulties in tracking down authors and their heirs or assignees. Easing aspects of the copyright system that hold works under restrictions might actually serve to *foster* self-actualization and maintenance of the creative spirit imbued in the work, since preservation activities may recapture some essence of authorial

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[626] Desai 2008, p. 115.

[627] Strangely, authorial rights to preserve works that their physical owners planned to destroy have gotten little traction, even in countries with strong moral rights traditions; private property rights have overruled moral rights of integrity. Baldwin, pp. 33-34. A few states have enacted such laws, however, including California and Massachusetts, but their statutes voice appeals both to authorial rights and to the preservation of a public benefit. Joseph L. Sax, *Playing Darts with a Rembrandt: Public and Private Rights in Cultural Treasures*. University of Michigan Press, 1999, p. 22.

[628] Several examples of visual artists who aestheticized the decay of their own works or made them intentionally out of unstable materials such as ice, grass, or food are given in Lowenthal 1985, pp. 172-173.

[629] Sundara Rajan, p. 46. The sole implementation of moral rights in federal intellectual property law, the Visual Artists Rights Act of 1990 (codified in 17 U.S.C. § 106A), is designed to protect artists' works from being destroyed or altered by others, reflecting a belief that "when an artist creates and important work of art, she generally intends to make a lasting contribution to aesthetic discourse." Lior Jacob Strahilevitz, "The Right to Destroy". *Yale Law Journal* 114 (2005), pp. 781-855, at p. 828.

[630] Some commentators also use the term *orphan works* to refer to works that do not have enough commercial appeal to justify remaining on the market; the preservation of such works is sometimes neglected even though their rights status is not under dispute. Throughout the current document, I refer to such works as *out-of-print* works, reserving the term *orphan* specifically for works with uncertain copyright provenance. National Film Preservation Foundation, *The Film Preservation Guide: The Basics for Libraries, Archives, and Museums*. National Film Preservation Foundation, 2004, p. 3.

[631] Register of Copyrights, *Report on Orphan Works*. United States Copyright Office, 2006, pp. 3-4.

individualism that might otherwise have perished for eternity. Often, creators may not even know their works are in danger of disintegration – or they may be dead, in which case the preserved works might well stand as one of the chief expressions of their personalities that survives to later generations.

All rights have limits. They are limited, in the natural-rights tradition, only by competing rights; as the old libertarian adage goes, my right to swing my fist stops at your nose (or perhaps sooner!), because you have a right to bodily integrity that conflicts with my freedom of movement.[632] Thinking of copyright in isolation, as a right bestowed upon creators without restriction, misses the larger structure of (potentially competing) rights in a free society.[633] "Property rights can only exist within a defensible framework", according to Merges, "as Kant's universal principle requires, if they take into account the freedom of others."[634] This suggests that the personality-based conception of intellectual rights, including those drawn from theorists after Kant, will inevitably need to weigh limitations and balances in relation to those rights. Indeed, a balancing approach is manifest in many aspects of tangible property. Rights of the owner to control usage and exclude others from private property are limited in myriad ways to protect competing fundamental rights. For instance, the doctrines of easements and the public trust ensure freedom of movement; imminent necessity protects right to life in dire scenarios; and anti-discrimination statutes safeguard rights of equal protection before the law.[635] Natural-rights theorists, whether Lockean, personality-based, or otherwise, may find one or another of these limitations unjustified on a competing rights claim, but it seems unlikely that *all* of them would be found to have no serious basis in legitimate competing rights.

This tension between (authorial) rights and (public) liberties is manifest in intellectual property just as vividly. It was recognized even before copyright, as such, was developed; attempts by late 17th-century English booksellers to assert perpetual property rights in publications were challenged by commentators who saw such endeavors as inimical to principles of liberty enshrined by the Glorious Revolution.[636] If the moral right of the author is a proper natural right, it is a right that saw widespread recognition only with the Enlightenment-era championing of the individual,[637] and as Peter Menell has noted, "[s]ocieties took an interest in the protection of knowledge long before copyright came into existence",[638] let alone moral

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[632] The phrase appears to be of nineteenth-century origin. See < http://quoteinvestigator.com/2011/10/15/liberty-fist-nose/ >.
[633] Alfred C. Yen aptly notes, "the real heart of the resistance [to natural-law copyright] comes from the belief that natural law implies an unprincipled expansion of authors' rights which will run amok over the public interest in free access to works." Yen, p. 546.
[634] Merges, p. 96.
[635] Carrier, pp. 190-192.
[636] Johns, pp. 109-111.
[637] Carla Hesse, "The Rise of Intellectual Property, 700 B.C. – A.D. 2000: An Idea in the Balance". *Daedalus* 131 (2002), pp. 26-45.
[638] Peter S. Menell, "Knowledge Accessibility and Preservation Policy for the Digital Age". *Houston Law Review* 44 (2007), pp. 1013-1071, at p. 1019. Of course, chronological priority does not equate to moral priority in this case; the point is that the recognition of a new right should not obviate the value of an old one.

rights. For instance, deposit requirements were established in England from 1637 to 1649 and again in 1662, and were incorporated into the Statute of Anne (though they were contested by booksellers as a burden, serving, they argued, as a *de facto* tax and a hit to potential sales).[639] Archival and preservation values were thus a part of copyright from its earliest formal articulations.[640]

How weighty is the restriction on liberty that a preservation-ignorant copyright would pose? As Jeremy Waldron notes, if it is proposed that "intellectual property infringes a moral right to liberty, then the behavior it constrains must be identified as having a special moral significance."[641] It might be argued that preservation is a relatively trivial component of liberty, or that it is a mere *interest*, which cannot trump a right legitimately asserted by an author. Yet preservation and access activities protect fundamental rights, too.[642] Freedom of expression and freedom of access to information and education are part of the suite of fundamental rights reserved to the public that states protect when they implement copyright limitations.[643] These are rights safeguarded by preservation projects; preservation, by maintaining creative expressions and providing access to them, is *fundamentally* a free-speech activity. Ultimately, however, copyright's authorial controls and its user liberties serve coinciding large-scale goals – copyright is a means of encouraging, rather than impeding, the free speech of authors, and correspondingly, for members of the public to hear, to respond (as authors themselves), and to learn from that speech, now and in the indefinite future.[644] The conception of user-side liberties such as personal use and fair use as *user rights* grew after Lyman Ray Patterson and Stanley Lindberg developed the theory in a 1991 treatise,[645] but this conception has had little traction in (American) courts.[646]

[639] Section V of the Statute of Anne demands nine copies be delivered to the Crown for distribution to the major university libraries of England and Scotland. 8 Anne c. 21 (1710). See also Johns, pp. 216-220.
[640] Menell, p. 1021.
[641] Waldron, p. 868.
[642] Patterson and Lindberg, at p. 124, draw from twentieth-century free speech jurisprudence to assert, "free-speech rights encompass the right to *hear* as well as the right to *speak*, the right to *read* as well as the right to *print* – that is, a *right of access*." Emphasis original.
[643] Patricia King made this argument in relation to derivative visual art works or collage/montage-style works that incorporate elements of other works. Patricia King, "Copyright, Free Speech, and the Visual Arts". *Yale Law Journal* 93 (1984), pp. 1565-1586. The parallels to audio sampling are obvious. See also Breakey generally and at pp. 45, 72; while his analysis is in general more strongly tied to Lockean natural-rights reasoning, at p. 45 he notes a set of shared commitments that all natural rights theories defend in full or in part, and argues, "*each and every* one of these precepts proscribes strong intellectual property rights." (emphasis original)
[644] This sentiment is developed in Netanel 2008, and by Patterson and Lindberg, at pp. 127-128. Moral rights of attribution and first publication arguably also protect important free-speech principles, insofar as they foster authenticity of witness in the historical record and allow speakers to formulate and express complex ideas at their own leisure, respectively.
[645] Patterson and Lindberg. But see Jane C. Ginsburg, "Authors and Users in Copyright", *Journal of the Copyright Society of the U.S.A.* 45 (1997), pp. 1-20, who critiques the trend.
[646] However, it has been more generally adopted by Canadian courts. David Vaver, "Copyright Defenses as User Rights". *Journal of the Copyright Society of the U.S.A.* 60 (2013), pp. 661-672, at p. 667.

We have duties to others in addition to rights, in Kant's conception – in particular, duties to respect the dignity of others, and duties to the wider human community.[647] Accepting the benefits of copyright, then, perhaps also implies shouldering a corresponding burden – of stewardship, or at the very least, of permitting others to carry out that stewardship unfettered, if one does not do so oneself.[648] "An implicit part of the copyright bargain", in Patterson and Lindberg's formulation, "is that the author will not use copyright to inhibit learning or to defeat the public domain…[and] assumes certain obligations in return for the statutory grant: to provide public access to the work and to preserve the work for the public domain."[649] Personality-based justifications, and by extension moral rights copyright regimes, demand reevaluation when they fail to warrant the preservation of mankind's cultural record.

D. Applications beyond Copyright

My analysis has focused on one particular aspect of intellectual protection, but intellectual property covers far more than just copyright. The lapses in intellectual property theory that affect curation and preservation of culture are most prominently a problem for copyright, but do they have any applicability to theory or practice of patents, trademarks, or trade secrets, as well? I will consider each in turn.

- *Patents*. Patents thwart the reproduction of physical manifestations of the useful objects they protect; in this sense, they hamstring preservation of technical items or processes. However, two practical aspects of modern patent law worldwide curtail most serious preservation issues in the realm of patents. First, patents last for only twenty years in most countries, including the United States,[650] and have never lasted more than twenty-one years.[651] This is a short enough period in practice to allow for reproduction or reconstruction of most useful objects once they enter the public domain. Second, patents require disclosure in full of the manufacturing or generative processes for the patented material. These patent descriptions are a matter of public record. Thus, in theory, any patented idea could be re-generated in full from its description (assuming that a faulty description was not filed), and the texts of patents are kept in multiple copies in multiple places – a lesson the U.S. Patent Office learned early in its history.[652]

[647] Merges, p. 87.
[648] Patry 2009, pp. 122-123; Patterson and Lindberg, p. 216.
[649] Patterson and Lindberg, p. 138.
[650] Except design patents, which have a length of 15 years as of May 13, 2015. 35 U.S.C. §§ 154, 173.
[651] The Patent Act of 1836, Pub. L. 24-357, 5 Stat. 117, allowed for a seven-year extension on the original fourteen-year grant. This was reduced to a single term of 17 years in 1861. Pub. L. 36-88, 12 Stat. 246.
[652] A disastrous conflagration that swept through the Patent Office on December 15, 1836 destroyed thousands of patents and patent models, most of which were never restored. See < http://libguides.princeton.edu/c.php?g=84225&p=543833 >. In 1870, the Patent Office began publishing issued patents in full. Patent Act of 1870, 16 Stat. 198.

- *Trademarks*. There is a sense in which trademarks fundamentally differ even on first principles from copyrights and patents, since their usage is not meant to protect or disseminate new intellectual ideas, except in the limited sense of forging the idea of an association between a symbol and the institution that has trademarked it. Their purpose has always been instrumental and economic, to distinguish agents in the marketplace, and so if preservation interventions were needed in trademark law, natural-rights defenses would seem to have little philosophical traction against such efforts. Trademarks have the potential to last indefinitely if they are not abandoned or genericized, and so seem to pose a prima-facie threat to some aspects of preservation. However, a trademark that is in consistent use is, by definition, not under threat of disappearance, and trademarks that are not in consistent use are considered abandoned, at which time anyone may reproduce them. In either case, disappearance of the mark is not enabled in any way by the structure of the law or the theory that underpins it. Trademarks would pose a preservation problem if they could be used to stop the reproduction of once-copyrighted material bearing the trademark that has entered the public domain, but this appears to have been prevented by the *Dastar* decision.[653]

- *Trade Secrets*. Trade secrets are inherently troubling from a preservation perspective, because they keep information (ideas and their expressions) from the public, and do so indefinitely. Nevertheless, from an economic standpoint, they are easy to justify as a trade-off that makes commerce possible and spurs ingenuity. Trade secrets are unpublished facts that are never willfully released to the public in any form, and so a company whose trade secrets are released would seem to have as strong a case against unauthorized external distribution (and thus preservation) as would the victim of an intrusion-upon-seclusion privacy tort, or someone whose private diary[654] or unpublished memoir[655] had seen unauthorized distribution. However, once trade-secret information has been published and is available – that is, once the secret is out and is no longer protected – it would contravene the principles I have outlined here if further preservation of that information were suppressed; Merges's nonremoval principle applies in that case. Trade secrets can play an ancillary role in impeding preservation if they enhance technological obsolescence, as they do when, e.g., proprietary information about file formats inhibits digital preservation efforts.[656] This may make reverse-engineering efforts more justifiable, though it would in no way justify intrusive efforts to obtain and release trade-secret documents, nor would it justify using the law to compel trade-secret holders to divulge the information needed to preserve.

[653] *Dastar Corp. v. Twentieth Century Fox Film Corp*, 539 U.S. 23 (2003).
[654] *Salinger v. Random House, Inc.*, 811 F.2d 90 (2nd Cir. 1987).
[655] *Harper & Row v. Nation Enterprises*, 471 U.S. 539 (1985).
[656] Catherine Ayre and Adrienne Muir, "The Right to Preserve". *D-Lib Magazine* 10 (2004), issue 3.

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I have argued that the peculiar state of sound recording copyright in the United States illustrates a more fundamental need for root-and-branch reconsideration of some of the most basic tenets of intellectual property philosophy. Extraordinarily long copyrights (those that extend far beyond the normal human life span), coupled with scope increases which heavily restrict or penalize unauthorized usages, are difficult to justify on solid theoretical ground – despite their widespread adoption in the developed world. Philosophies of intellectual property which do not take this into account run the risk of lending support to policies which can pose existential threats to the works they are nominally intended to protect. Instead, it should be taken as a pillar principle that the material degradation of intellectual works serve as grounds to limit the reach of property claims. While this omission is not endemic to any particular philosophical system, is most glaring among neo-Lockeans, whose consideration of the spoilage proviso has largely overlooked one of the most pressing ways in which cultural waste manifests itself.

However, it may be argued that, since the example I have explored above – audio recording – is an extreme case, its idiosyncrasies make it ill-suited for the purposes of extrapolating a *general* theory limiting intellectual rights. I will continue by examining two other classes of creative works whose stability over time is often uncertain: moving images (i.e., film and video recordings), and video games. Together with audio recordings, these examples illustrate problems with the archetype of the long-term information carrier that are common to many other nineteenth- and twentieth-century media – even to print media such as newspapers and acidic wood-based paper books. I choose the examples of audio, moving images, and video games for the following reasons:

- Each example is a new non-print technology, generated in the late nineteenth century or later, after the development of the main streams of intellectual property thought – thereby complicating theories that could not have proactively taken into account the new formats' eccentricities as substrates for copyrightable activity.

- Each is a hallmark of twentieth- and twenty-first-century creativity, particularly in the United States (whose cultural output in these areas is distributed and consumed in vast quantities worldwide). Collectively, these three media represent some of the most important contributions Americans have made to the world's cultural legacy in the past 150 years. American copyright law and philosophy, as applied to American cultural works, ultimately has worldwide repercussions, in terms of global cultural access, consumption, and creativity, as well as international copyright policy.[657]

[657] This work is called "No Country for Old Media", but its findings apply to other countries insofar as they mirror or extend American intellectual rights trends – and this is increasingly coming to pass, partly as a result of American international lobbying.

- Each reveals unique, difficult practical and technical problems in recording, storing, duplicating, and disseminating its intellectual works. These problems can serve as profound impediments to preservation, often threatening those works' very existence – which, as I have argued, subverts the purpose of copyright itself.

- The relative novelty of video games also offers a chance to look at consequences of the post-1976 expansion of scope and duration of copyright applied to emergent creative genres. Copyright must look to the future, as new forms and formats of cultural expression come into use; it ought not hinder this process, nor should it hinder the capturing of those new expressions for future generations.

V. Moving Image Copyright

For film works, copyright history officially begins in 1912, with the passage of the Townsend Amendment to the Copyright Act of 1909,[658] though pre-1912 works were sometimes deposited with the Library of Congress as paper prints, and thus were copyrighted as a series of thousands of still photographs.[659] For instance, William Kennedy Dickson, who worked for Thomas Edison, submitted (and was granted) copyright registration for some early films made for the Edison company's Kinetoscope in 1893-1894 by printing a sheet containing all of the frames making up the film.[660] Between 1894 and 1897, a series of companies brought projection devices to market; film studios were rapidly established on both coasts of the United States, along with playing houses throughout the country. Yet the burgeoning film industry more or less ignored the potential copyright implications of film works at first,[661] and, like sound recordings, patent battles loomed much larger over the litigation landscape than copyright disputes.[662] As Peter Decherney notes, "[f]or years, films were made primarily to sell equipment, where the real money was to be made."[663] For about a two-year period between late 1894 and late 1896, no films were submitted for copyright; only after about 1899 did registration of film copyright, as a set of still photographs, become more common.[664] During this time, unauthorized copying of films was rampant, and came in two forms: *duping*, the mechanical reproduction of negative prints from another studio's positive print (thus, as straightforward a type of copying as is

[658] Pub. L. 62-303, 37 Stat. 488 (1912).
[659] Slide, p. 36. Photography became copyrightable after an 1865 amendment to the Copyright Act, but the degree to which any given photograph represented sufficient originality to qualify as artistic expression remained an unsettled question. An 1884 Supreme Court decision affirmed general copyright in photographs displaying originality or artistic control. *Burrow-Giles v. Sarony*, 111 U.S. 53 (1884). In a few cases, some studios attempted to deposit full film rolls, or single frames from every major scene of the film, with the Copyright Office. Decherney, p. 13.
[660] Oren Bracha, "How Did Film Become Property? Copyright and the Early American Film Industry". In Brad Sherman and Leanne Wiseman, eds. *Copyright and the Challenge of the New*. Wolters Kluwer, 2012, pp. 141-177, at pp. 152-153.
[661] Litman 2001, p. 40.
[662] Bracha, p. 177.
[663] Decherney, p. 20.
[664] Bracha, p. 154.

possible for film), and reenactments or shot-for-shot remakes of other studios' work.[665] Duping of films without copyright notices was a widespread practice, including for the Edison studio, which was an industry leader in seeking copyright registration and litigating infringement cases.[666] It was also necessary in order to bypass format problems with the equipment, since each company's projectors had different sprocket-hole placements and could not play film made by other companies.[667]

Prior to about 1900, single-shot scenes were the only technically feasible motion pictures, making them more or less faithful reproductions of a scene or event, much like a photograph. Such a film was the subject of the 1903 case *Edison v. Lubin*,[668] which established that films could be copyrighted as a single photographic work, rather than requiring that each individual photograph be independently registered.[669] Soon, however, multi-shot films, editing, trick-shot special effects, and the introduction of narrative elements vastly increased the creative capabilities of the medium. Multi-shot films were held to be copyrightable as single works in *American Mutoscope v. Edison*,[670] following *Edison v. Lubin*'s precedent, but could the films also be registered as dramatic works in addition to photographs, as Edison was attempting by this time?[671] The question of whether derivative work rights could be applied to film was addressed in *Kalem Co. v. Harper Bros.*,[672] which established the securing of film rights for screenplays as a necessary precursor to producing a motion picture. The Kalem Company, a New York-based studio, adapted Lew Wallace's novel *Ben-Hur* in 1907, and was promptly sued for infringement by Wallace's publisher. In 1911, the Supreme Court ruled against Kalem, holding that the film was properly considered a dramatization of the book, and that screening the film constituted a public performance of the original work. The 1912 Townsend Amendment thus formalized a film copyright that had more or less already been established by the courts.

In the following subsections, I will illustrate problems with moving image copyright and preservation paralleling those of sound. First, I will examine duration, which was unusually short for certain films (though many of those are still copyrighted as adaptations of their underlying stories). Second, I will discuss scope, focusing on moral rights as applied to film, on the progression of fair use court decisions relating to film and video, and on how these decisions presaged the growth of technological protection measures and the DMCA. Third, I will enumerate the unique challenges of degradation and obsolescence native to moving image formats. Fourth, I will chronicle historical attempts to preserve moving image works – the

[665] Bracha, pp. 154-155.
[666] Decherney, p. 19.
[667] Decherney, p. 20.
[668] 122 F. 240 (3rd Cir. Pa. 1903).
[669] Vaidhyanathan, p. 90.
[670] 137 F. 262 (C.C.D.N.J. 1905).
[671] Decherney, p. 27; Litman, p. 48.
[672] 222 U.S. 55 (1911).

original 'orphan works' – both from within the motion picture and television industries and from without.

A. Duration

The legal environment films entered was that of the 1909 Copyright Act – a 28-year statutory term with a 28-year renewal period. Since 1912, the copyright term of film works (as well as, later, video) has paralleled that of other ordinary copyrightable materials. It therefore exhibits all the same complexities, including that of pre-1978 unpublished works and of foreign works whose copyright may be retroactively instituted through the Uruguay Round Agreements Act.[673] However, prior to the copyright overhauls of the latter twentieth century, many films fell into the public domain early, often due to failures to follow formalities required to substantiate the claim of copyright; their copyright durations were therefore unusually short – the inverse of the scenario for sound recordings. Films whose term of copyright was not renewed lost the possible additional 28 years (before 1978) or 47 years (before 1989) of protection.[674] While this often occurred because the studios saw no economic viability in the film, especially for films that had been remade,[675] it sometimes happened due to bookkeeping errors, as in the case of *Pygmalion* (1938),[676] the third movie in the *Topper* series, *Topper Returns* (1941),[677] and *It's a Wonderful Life* (1946).[678] Films that were not registered with the Copyright Office and were published without a notice of copyright, or with an improper copyright notice,[679] entered the public domain *immediately* – a circumstance widely seen as an unfair technicality,[680] and which in part motivated the passage of the Copyright Act of 1976. A number of well-known films entered the public domain in this way, including *Charade* (1963) and *Night of the Living Dead* (1968).[681] However, the underlying story rights for many of these films is still held under copyright, as is the case with *It's a Wonderful Life* and *Charade*, paralleling the composition/recording dual copyright of sound recordings.[682]

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[673] This happened, for instance, to the films *The Third Man* (1949) and *The 39 Steps* (1935), among many others. Copyright reinstatement notices for these films were filed after the passage of the Uruguay Round Agreements Act, and the *Golan v. Holder* decision upheld the Act as constitutional. "U.S. Supreme Court Takes '39 Steps' Back from the Public Domain". Greenberg & Lieberman LLC. Available at < http://aplegal.com/blog/u-s-supreme-court-takes-39-steps-back-from-the-public-domain/ >.
[674] National Film Preservation Foundation, p. 78.
[675] David Pierce, "Forgotten Faces: Why Some of Our Cinema Heritage Is Part of the Public Domain". *Film History* 19 (2007), pp. 125-143, at pp. 131-133.
[676] Steven Mitchell Schiffman, "Movies in the Public Domain: A Threatened Species". *Columbia-VLA Journal of Law and the Arts* 20 (1996), pp. 663-681, at p. 670.
[677] Pierce 2007, pp. 127-128.
[678] Rick Karr, "*It's a Wonderful Life* Copyright". NPR, December 23, 2002. Available at < http://www.npr.org/templates/story/story.php?storyId=888609 >.
[679] Before March 1, 1989, the film's notice of copyright had to have three components – the © symbol, the year, and the rightsholder's name. If one or more of these components was missing, copyright protection was lost. Pierce 2007, p. 128.
[680] Kaplan, p. 81.
[681] Pierce 2007.
[682] Karr; Pierce 2007, p. 130.

The elimination of the registration formality permanently ended this so-called trap for the unwary, though at a cost to public access. Pre-1963 renewals of copyright after 28 years never reached higher than 15% (though renewals were much more common for films), and so the vast majority of works fell into the public domain after 28 years by default.[683] An analysis by the Rick Prelinger Archive of its own film holdings in the early 2000s indicated that 85% of the institution's pre-1964 inventory was public domain, while 28% of post-1963 works were public domain.[684] The cutoff hinges on the start of piecemeal copyright extensions as Congress debated the terms of what would become the Copyright Act of 1976. Some pre-1964 films were not renewed after their terms expired. Between 1964 and 1976, nine short extensions to copyright duration were passed,[685] and in 1976, the expanded term with no renewal and automatic inherence of copyright upon fixation was implemented (effective 1978). Thus, any film in which copyright was asserted in 1964 or later is likely still under copyright.

The reception history of *It's a Wonderful Life* is worth examining in more detail, as this work has become a key example to both copyright maximalists and minimalists regarding the promise and peril of faster entry into the public domain. The work was critically successful and garnered five Academy Award nominations (including Best Picture), but failed to recoup its production budget at the box office in 1946,[686] and director Frank Capra sold the work to Paramount Pictures the following year as his production company, Liberty Pictures, sought unsuccessfully to stave off foreclosure.[687] In the 1950s and 1960s, the work was just one of many memorable films in Jimmy Stewart's Hollywood resume; Capra's films *It Happened One Night* (1934), *Mr. Deeds Goes to Town* (1936), and *Mr. Smith Goes to Washington* (1939) were considered more important cinematic landmarks.[688] After the film's lapse into the public domain in 1974, television stations turned to it as a royalty-free Christmastime programming staple. This increased airing exposed the work to millions of people every year, making it a de facto

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[683] Deirdre K. Mulligan and Jason M. Schultz, "Neglecting the National Memory: How Copyright Term Extensions Compromise the Development of Digital Archives". *Journal of Appellate Practices and Processes* 4 (2002), pp. 451-473, at pp. 457-458, esp. at footnote 19. Registration renewals steadily increased from 3.57% in 1910 to 14.7% in 1959, but this would nevertheless have left the remaining unrenewed 85% in the public domain. Renewals for motion pictures were substantially higher. 43.8% of film copyrights were renewed in 1954; this increased to 74% by 1959. Schiffman, p. 667; Patry 2011, p. 106. This leaves a large number of other works made between 1923 and 1963 that are likely in the public domain due to failure to renew. See Hirtle. Confirming that this is the case for any particular work, of course, is difficult and time-consuming. Pre-1978 registration records are not available online; to search them, one must either travel to the Copyright Office and search the paper records, or pay the Copyright Office a fee to do the search (currently $200/hour, 2 hour minimum). See "How Can I Tell Whether a Copyright Was Renewed?". University of Pennsylvania Library Online Books Page. Available at < http://onlinebooks.library.upenn.edu/renewals.html >; and "Search Estimate", U.S. Copyright Office. Available at < https://www.copyright.gov/forms/search_estimate.html >.

[684] Mulligan and Schultz, p. 461.

[685] Tom W. Bell, "Escape from Copyright: Market Success vs. Statutory Failure in the Protection of Expressive Works". *University of Cincinnati Law Review* 69 (2001), pp. 741-805, at footnote 202.

[686] John McDonough, "A Christmas Movie's Wonderful Life". *Wall Street Journal*, December 19, 1984.

[687] Steven Cox, *It's a Wonderful Life: A Memory Book*. Cumberland House, 2003, p. 112-113.

[688] McDonough 1984.

Christmas ritual for American families by the 1980s.[689] The movie's yuletide ubiquity was even integrated into Christmas films of the era – bored family members sit watching TV broadcasts of the film in *National Lampoon's Christmas Vacation* (1989) and both *Home Alone* (1990) and *Home Alone 2: Lost in New York* (1992), and a videotaped excerpt of it plays a minor plot role in *The Ref* (1994). Concomitantly, the film was pushed out to home video, sometimes in poor quality, by a variety of companies, and was colorized for broadcast.[690] The work's reputation, both in the eyes of critics and the public at large, soared; the American Film Institute named it the eleventh-greatest American film of all time in 1998[691] and the most inspiring American film of all time in 2006.[692] Republic Pictures, which was the rightsholder of the film from 1969 until its lapse,[693] also held the rights to the underlying story on which the film was based, Philip Van Doren Stern's short story "The Greatest Gift". The Supreme Court had affirmed, in *Stewart v. Abend*,[694] that an underlying work's copyright can still be asserted by its rightsholders regardless of the derivative work's copyright status – just as with sound recordings in the public domain.[695] Republic also bought the rights to the film score.[696] Its legal position secure, Republic began enforcing story and music rights in 1994, granting NBC the exclusive license to broadcast it at Christmas.[697] While the film is still technically public domain, this status is now moot until the underlying rights lapse; Van Doren Stern's story was published in book form in 1944, meaning its copyright will expire in January 2040.

It's a Wonderful Life was hailed by some copyright scholars as an example of the marvels of free access under the public domain, a position challenged by Scott M. Martin.[698] Martin instead saw the film's saga as one of degradation and decay in the public eye. The film was rebroadcast constantly, cheapening and trivializing it; it was issued to home video for a few dollars on inferior VHS transfers; it was colorized (a flashpoint for filmmakers, including Capra, in the 1980s, who saw it as bastardization of their art);[699] it was cut and interlaced with commercials.[700] For Martin, Republic's reassertion of rights was a triumph for the holiday classic, which was thereafter rebroadcast in high quality in the NBC showings. "When the underlying rights to the film were not being enforced", Martin asserts, the film "was an orphan of

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[689] McDonough 1984.
[690] Cox, p. 113.
[691] "AFI's 100 Years, 100 Movies". American Film Institute. Available at < http://www.afi.com/100years/movies.aspx >. In a 2008 update, the film was ranked #20.
[692] "AFI's 100 Years, 100 Cheers". American Film Institute. Available at < http://www.afi.com/100years/cheers.aspx >.
[693] Cox, p. 113.
[694] 495 U.S. 207 (1990). The Stewart in question is, of course, Jimmy Stewart once again, who was sued by the literary agent who held the copyright on the story underlying the film *Rear Window*.
[695] Early, pp. 141, 145-146.
[696] James Bates, "Putting the Brakes on a Christmas Classic". *Dallas Morning News*, November 25, 1993.
[697] Bill Carter, "The Media Business; Television". *New York Times*, December 19, 1994.
[698] Martin, pp. 273-274.
[699] Anthony Slide, *Nitrate Won't Wait*. McFarland, 1993, pp. 123-124, 132-133.
[700] Stan Liebowitz makes similar arguments regarding sound recordings, claiming that overuse and misuse of works, as well as consumer protection standards, militate in favor of copyright stewardship. Liebowitz 2007, p. 20.

the public domain, exploited without regard to quality, ravaged and uncared for. Only after the copyrights in the underlying rights were enforced was anyone willing to spend the money necessary to restore and preserve the film."[701] Martin's case is weak for several reasons. First, he discounts the role that mass public access, enabled by its public-domain status, directly played in the film's rise to prominence in American memory, and thus, its viability in the marketplace. The work would likely never have acquired its cultural and economic cachet in the absence of its omnipresence on local television. Second, the preservation of the work per se was never in jeopardy, and its public-domain status actually fostered rather than hindered its preservation. Existing 35mm prints of the film in the 1970s had been cut during the film's protected life, to be shown as part of double features (the film is over two hours long). A film professor at UCLA, Bob Epstein, began interlacing 35mm and 16mm prints to restore the full length of the film, a process he had completed by 1976.[702] Third, the inferior quality of broadcasts and home video releases is not sufficient reason to confer eternal copyright for the sake of quality control. Access copies are often inferior in quality, and rightsholders routinely make lower-quality copies available on their own. For instance, YouTube and Vevo videos uploaded by rightsholders are often not transmitted in high definition; streaming internet video quality is routinely lowered based on bandwidth considerations; and television screenings of films are edited for content, truncated in order to conform to network schedules, and littered with interstitial commercials.[703] Fourth, Martin's claim that only exclusive rights could have resulted in its proper restoration is overstated. High-quality restorations are copyrightable, since they add new creative elements to the work; so is home-video bonus content. A studio-authorized version could very well have competed with free in the marketplace, both on television and at the (online or brick-and-mortar) video store.[704] Lastly, official re-releases of the film have done some of the same things to the film that public-domain actors did; a 2007 DVD release includes a colorized version authorized by the rightsholders.[705]

Like Hatch's argument regarding copyright and the stewardship of creators, Martin's analysis proclaims a concern for caretaking of the work and of the work's creators, but its practical effect is instead to buttress and protect the viability of existing rightsholders' exclusive market shares. Martin's case is built partly on moral-rights indignation over the sullying of artistic treasures, and partly on utilitarian claims that works are better served when they are under rightsholder control;[706] neither holds up to empirical scrutiny. Nevertheless, the broader issue of early or accidental copyright loss is germane to a preservation-based copyright philosophy.

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[701] Martin, p. 274.
[702] Glenn Erickson, review of *It's a Wonderful Life* DVD re-issue. DVDtalk.com. Available at < http://www.dvdtalk.com/dvdsavant/s3065life.html >.
[703] Martin, at p. 273, decries local networks who cut the film and "stuffed it with commercials". Erickson also notes heavy editing, some of which likely interfered with the film's storyline, in rebroadcasts.
[704] The free availability of works is not in itself a barrier to market success; for decades, the publishing industry has competed against libraries offering free access to books. Ruben Bolling, "Library System Terrorizes Publishing Industry". *Tom the Dancing Bug*. Cartoon. Rpt. In Tushnet, p. 990.
[705] Erickson.
[706] Patry 2011, pp. 114-115.

While, as I have argued, shorter copyright aids in preservation, intellectual property defenses would doubtless be united in the conviction that no author ought to lose copyright protection due to sheer red tape or clerical errors.[707] Yet moving to an automatic investment of copyright for all works was not necessary to solve this problem; it would just as well have been served by increasing the window of renewal. If copyright renewal applications were accepted starting, say, three or five years before expiration, accidental losses such as happened to *It's a Wonderful Life* would be minimized, and without the accompanying drawbacks of opt-out copyright rather than opt-in. As for works with faulty notices that became public domain immediately, such as *Charade* (which failed to include the © symbol in its notice),[708] it is noteworthy that another simple formality – registration and deposit – was also available to creators.[709] A sensible remedy for purely accidental omissions was implemented by the Copyright Act of 1976, which allowed works without notice to be subsequently registered up to five years after publication. This set up a reasonable five-year presumption that works without notice may become copyrighted unless explicitly declared public domain, pushing out works only if they had not been registered by that time. It was ended with the implementation of Berne in 1989.[710]

One final aspect of moving image copyright duration intertwines the copyright difficulties of film and sound recordings. A minor controversy erupted in the 1970s over the copyrightability of film soundtracks divorced from their visual materials.[711] The Sound Recording Act of 1971 explicitly excluded sound recordings accompanying visual media, presuming that they were already covered by the grant of motion picture copyright;[712] however, the motion picture copyright was implemented in 1912, when films were silent, and, according to some commentators, could not have been meant to cover audio elements added later.[713] The 1976 Copyright Act resolved this problem for post-1977 soundtracks, but pre-1978 soundtracks inhere in a legal gray area similar to that of sound recordings, apparently unprotected by federal copyright (though there is a dearth of case law) but potentially subject to state protections.[714]

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[707] Schiffman, p. 663.
[708] Pierce 2007, p. 130. *Charade*'s underlying work, a 1961 short story by Peter Stone, is still held under copyright, so rightsholders are able to assert control over the film, though it is still available at bargain-basement prices on DVD from multiple distributors.
[709] Early, p. 145. An even more egregious example is provided in *J.A. Richards v. New York Post,* 23 F. Supp. 619 (S.D.N.Y. 1949), in which a copyright was invalidated because it was included on the back cover of a book, rather than on the title page or the page immediately following. Schiffman, p. 665.
[710] Hirtle.
[711] Ken Sutak, *The Great Motion Picture Soundtrack Robbery*. Archon, 1976.
[712] H. Rep. No. 92-487 (1971), pp. 5-6.
[713] E. Fulton Brylawski, "Copyrightability of Motion Picture Sound Tracks". *Bulletin of the Copyright Society of the U.S.A.* 18 (1971), pp. 357-370.
[714] E. Fulton Brylawski, "Motion Picture Soundtrack Music: A Gap or Gaff in Copyright Protection?". *Journal of the Copyright Society of the U.S.A.* 40 (1993), pp. 333-348.

B. Scope

Copyright's expanding scope has affected access to and preservation of film and video in ways parallel to, but different from, sound. Film, in particular, offers an opportunity to look in detail at the relationship between personality-based intellectual property thinking and actual copyright implementation, since the medium was repeatedly a flashpoint for moral rights clashes during the twentieth century. Moving images also played host to major fair use debates, particularly over the issue of home copying, which led directly to new technological controls (in the form of digital rights management) and legal regimes (through the Digital Millennium Copyright Act) designed to stop copying and distribution of any kind, for any purpose, including preservation.

For several decades after the Townshend Amendment was passed, protracted battles over the limits of the idea-expression dichotomy and the concept of *scenes a faire* followed in a series of lawsuits, from which developed Hollywood's strict reliance on contracts to regulate script contents and fend off accusations of unauthorized adaptation.[715] To a certain extent, this reflects utilitarian-based attempts to maximize the economic benefits, and minimize liabilities, of parties involved in the filmmaking process – scriptwriters, actors, directors, producers, crew, distributors, and projectionists, among others. The work for hire doctrine, an outgrowth of language in the 1909 Copyright Act,[716] was embraced by the studios, which wanted control over content and distribution unhampered by claims from myriad creative employees.[717] The applicability of moral rights thinking to studio filmmaking remains uncertain; there is no clear rationale for determining the authorship of a film in American copyright law.[718]

Nevertheless, crosscurrents of personality-based moral rights thinking increasingly came to the forefront of film theory and legal practice. Star actors such as Charlie Chaplin attempted to defend their on-screen images from re-use, asserting rights of personality in the characters they developed. Douglas Fairbanks objected to the editing of his five-reel films into two-reel serials, arguing that it was injurious to his reputation to have his work screened in short format (which was, at the time, considered less artistically significant).[719] Roy Rogers and Gene Autry made similar arguments when their films were shortened for broadcast on television.[720] In the 1950s and 1960s, auteur theory became more prominent in American film criticism, arguing that aesthetically valuable films reflect the singular vision of the director, who is properly considered the author and creative force deciding the film's content and meaning. Auteur theory is an import

[715] Decherney, pp. 59-107.
[716] The 1909 Act's creation of the work for hire doctrine was accompanied by minimal prior deliberation, and its contours took some time to work out in the courts, but by the 1940s, corporate authorship of works for hire was more or less on legally secure footing. Jaszi and Woodmansee, pp. 92-94. Similar language appeared in Britain's Copyright Act of 1911. Baldwin, pp. 217-218.
[717] Decherney, p. 141; Baldwin, p. 221.
[718] Sundara Rajan, p. 381.
[719] Decherney, pp. 108-109.
[720] Decherney, pp. 119-120.

from European cinema theory, buttressed by European-style moral rights,[721] and American directors welcomed this aesthetic revision, hoping that it would strengthen their legal position such that they would have the same rights as European directors over their works.[722] The new medium of television loomed large in these debates; the placement of advertising, editing for content, and colorization have all rankled the sensibilities of directors who sued to assert artistic control of films.[723] While auteur theory was largely successful in changing the public's image of filmmaking,[724] it was less so in American courts, who typically found for the studios' rights to change the works for broadcast.[725] Enforcing moral rights in such cases inherently involves making aesthetic judgments about what constitutes disfigurement or subversion of the work, which courts have steered away from, as it contravenes a cardinal free-expression doctrine: government should not be placed in the position to make pronouncements on the artistic content or value of speech. Authorial rights, here as elsewhere, are limited by competing liberties.

Film – that is, successive images captured on a transparent chemical base and played back at high speed – was only the first major technology to allow for the fixation and reproduction of moving image spectacles. Technological developments in the mid-twentieth century resulted in a blossoming of new ways of capturing, storing, and accessing such works, and new artistic forms developed to go along with each new format. Broadcast television, magnetic videotape, handheld (Super 8) film cameras, and video camcorders all changed how audiovisual works were created and experienced. So, too, did copyright, and copyright thinking, change with them. In particular, the home video market became a battleground for fair use, culminating in the *Sony v. Universal* case of 1984.[726] Home videocassette recorders, such as the VHS and Betamax, saw large-scale commercial introduction in the late 1970s, allowing television broadcasts to be recorded at home and (re-)watched at the user's leisure. Prior to this, those who missed the broadcast of a television program rarely got a second chance to experience it; they either had to wait for a rerun, or settled for hearing about it secondhand from someone who had seen it.[727] The time-shifting feature of videotape, the Court ruled in *Sony v. Universal,*

[721] E.g., in France, according to a 1957 statute, authorship of films lies with the director, scriptwriter, and composer as coauthors. Prior to this, several French courts had held that authorship was held solely by the producer. Pascal Kamina, *Film Copyright in the European Union*. Cambridge, 2002, pp. 40-42. However, the 1957 law also implemented restrictions on when and how authors may withdraw their contributions or block distribution, in pragmatic recognition of the large economic outlay that accompanies film production. Germany passed a law with similar strings in 1965. This is another illustration of how moral rights in practice are cumbersome and often unworkable unless tempered by utilitarian caveats. Baldwin, pp. 222-223.
[722] Decherney, p. 112.
[723] Baldwin, pp. 47-50; Decherney, p. 124.
[724] A curious development, since in previous decades, filmmakers were routinely derided for mutilating the literary works they adapted. Decherney, p. 127.
[725] The filmmakers had much more success on all fronts in continental Europe, where colorization was a clear infringement on authorial rights of integrity. Baldwin, p. 50. The rise of the pseudonym Alan Smithee, applied to films whose directors wanted their names removed from films in order to protest studio artistic decisions, is a result of the strength of the studio position in contract. Decherney, pp. 128-129.
[726] 464 U.S. 417 (1984). See Part IIIB.
[727] Lucas Hilderbrand, *Inherent Vice: Bootleg Histories of Videotape and Copyright*. Duke University Press, 2009, p. 10.

was a fair use; thus VCRs had a substantial non-infringing use, insulating their manufacturers from charges of contributory copyright infringement. By the time the case had been decided, VCRs were ubiquitous, and home taping of television programs had become an everyday practice in many family homes.

While this was a vindication of the newly legislated fair use doctrine, other video case law illustrates the inherent murkiness of fair use interpretation. Copying by the Vanderbilt Television News Archive, a university archive of videotaped news broadcasts, was found to be fair use, while a large-scale effort to tape educational videos for school libraries was not.[728] ESPN was sued in 1979 for using short clips of the day's games in its daily sports roundup program *SportsCenter*, and lost the case, establishing the need for industry negotiation of news footage licensing.[729] While some general fair use principles can be deduced from the details of the cases – the relative primacy of the fourth factor of fair use (market impact), the finding that usage of the entire work is not necessarily infringement, and the caveat that educational usage is not a definitive fair use determinant – video-related case law serves to buttress the general principle that fair use is always *post hoc*, a risk many prospective (rightful) users cannot afford to take.

Nowhere is this more obvious than in the widespread practice in filmmaking communities of carrying errors & omissions insurance. Lawrence Lessig gives the example of filmmakers who cannot shoot scenes in almost any space, public or private, without capturing copyright- or trademark-protected expressions requiring a labyrinth of rights clearance: billboards, posters, clothing designs and logos, stray snatches of songs and television programs, packaging lying casually on desks and tables, even architecture and landscaping.[730] The likelihood of unintentional infringement lawsuits is so high that film distributors now require insurance against copyright and trademark claims, and insurance companies, seeing too great a risk in any fair use assertion, now demand permission for every intentional usage.[731] Such a state of affairs is sometimes known as a *tragedy of the anticommons* – when "so many exclusionary rights are held by so many different agents over some one thing, or the necessary ingredients of some one thing, that the transaction costs of negotiating use of that thing become prohibitive."[732] This has downstream effects to archives, which are often used like stock footage libraries, and to film studios' in-house preservation efforts. Administration costs for copyright management often exceed the market value that can be extracted from older footage, which makes it less likely that

[728] *Encyclopedia Britannica v. Crooks*, 542 F. Supp. 1156 (1982). See Decherney, pp. 164-167.
[729] *New Boston Television v. ESPN*, 215 U.S.P.Q. 755 (D. Mass. 1981). See Decherney, pp. 168-169.
[730] Lessig 2001, pp. 3-5. See also Peter Jaszi, "Copyright, Fair Use, and Motion Pictures". In Robert Kolker, ed. *The Oxford Handbook of Film and Media Studies*. Oxford, 2008, pp. 557-578, esp. at pp. 571-572.
[731] Decherney, p. 197.
[732] Breakey, p. 55. The term was coined by Michael Heller in reference to patents, and it serves as the converse of the idea of the *tragedy of the commons* developed by Garrett Hardin. Michael Heller and Rebecca Eisenberg, "Can Patents Deter Innovation? The Anticommons in Biomedical Research". *Science* 280 (1998), pp. 698-701; Garrett Hardin, "The Tragedy of the Commons". *Science* 162 (1968), pp. 1243-1248. An example drawn from sound recordings, relating to Jay-Z's "Takeover", is given in McLeod and DiCola, pp. 95-98.

works will be preserved or reissued by studios, and increases the financial burden on archives seeking to provide access to researchers and film buffs.[733] The collective impact of fragility, copyright strength, fair use uncertainty, and donor stipulations has made film libraries and archives among the most restrictive of institutions in terms of granting access.[734] That said, film preservation – copying, in full, the works to new substrates – goes on apace at preservation institutions, and with good judicial and legislative backing; the House report accompanying the Copyright Act of 1976 used film-to-film preservation as an explicit example of fair use practice.[735]

Sony v. Universal represented a sea change in strategies for the entertainment industry. Prior to *Sony*, companies affected by new technologies, while often vocal about the threat posed to their current operations, tended to argue for small concessions in law and would incorporate the new capabilities into their business models.[736] In *Sony*, however, the entertainment industry effectively attempted to ban the technology itself.[737] The attempt was unsuccessful, but as later video media moved to digital substrates, they were increasingly released with digital encryption technologies, a systematic effort by content distributors – by marshaling technology, policy, and law – to block the sort of copying that made VHS tapes, audio cassettes, and photocopiers so effective in the analog world.[738] Since digital copies do not degrade as analog ones do, audio DAT cassettes, as noted previously, were coded with an algorithm that prevented successive copying.[739] Similarly, from the mid-1980s, VCRs were sold with one of several generations of scrambling software created by the Macrovision company, which distorts the video playback (though audio is unaffected).[740] The DMCA would later mandate that all VCRs sold domestically be equipped with an anti-copying device.[741] Similarly, all DVD players are sold with chips containing CSS (Content Scrambling System), a form of digital rights management that prevents playback unless the authorization codes of the disc and player match. Content providers refused to license de-encryption keys to DVD player manufacturers for multi-region DVD players, players that permit recording, or players with output ports for copying.[742]

Encryption strategies for protecting copyrighted works were given real teeth with the passage of the DMCA in 1998. The DMCA criminalized the circumvention of DRM controls in

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[733] Pierce and Schwartz, pp. 129-130.
[734] Rick Prelinger, "Archives and Access in the 21st Century". *Cinema Journal* 46 (2007), pp. 114-118.
[735] H.R. Rep. No. 1476, p. 73.
[736] They still attempted to implement technological protection measures that would allow them to control unauthorized usages, but many were not very successful. Examples include non-rewinding videocassette cartridges and trace marks embedded in 35mm film prints to track down theaters where piracy was occurring. Johns, pp. 449, 504.
[737] Herman, p. 167.
[738] Tarleton Gillespie, *Wired Shut*. MIT Press, 2007, pp. 167-169.
[739] See Part IIIB.
[740] Decherney, pp. 179-180.
[741] Herman, pp. 185-186.
[742] Decherney, p. 210; Patry 2011, pp. 44-45. Gillespie, at pp. 181-182, gives a detailed list of the entertainment industry's stipulations for manufacturers wishing to secure access to de-encryption keys.

virtually all circumstances, even though this was already illegal when done for purposes of perpetrating copyright infringement.[743] Circumventing DRM to access any digital copyrighted work was prohibited, as were manufacture, sale, and importation of tools that could circumvent DRM access controls or allowed for the circumvention of DRM to use the work in a way the DRM was intended to prevent.[744] The statute states that fair use and other defenses are unaffected by its passage,[745] but "fair use is not a defense against charges of circumvention or trafficking in circumvention devices", only to copyright infringement.[746] As a result of library opposition to the proposed law, a provision was implemented to allow librarians to circumvent DRM in the course of determining whether to add a work to their collections, but DRM circumvention for preservation was not included alongside this concession.[747] The bill also provides for the Copyright Office to carve out exemptions to the anti-circumvention provisions, which could eventually become an important site of preservation-facilitating possibilities, though it has seen little use in that capacity to date.[748] As passed, however, it virtually mandated the obsolescence of technologically protected digital content.

One fallout of the movement toward encryption is increased difficulty for downstream preservation attempts; Lucas Hilderbrand has aptly remarked, "[e]ncryption offers a short term fix to provide market protection that has detrimental long-term implications for preservation when content cannot be retrieved later".[749] Digital content *can* be retrieved, by using decryption algorithms such as DeCSS (or by simply copying the disc wholesale, with the CSS encryption intact), but this is now illegal under the DMCA, which criminalizes circumvention of access protection measures.[750] As with digital sampling of audio, free speech concerns arise here again: "Congress violates the First Amendment when...[it gives] the exclusive rights contained in Section 106 of the Copyright Act over a particular class of works (say digital works), if it also

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[743] Herman, pp. 179-180.

[744] This left unregulated the circumvention of DRM to *use* (rather than *access*) copyrighted works in a way the DRM was intended to prevent – so, for instance, one could write one's own computer code to copy a digitally protected audio file from one device to another, but could not distribute such a tool. Herman, p. 180; Gillespie, pp. 179-180. Jason Mazzone posits that circumvention of copy control itself was left unmentioned in the statute because Congress took for granted that it was already infringement under the Copyright Act. Mazzone, p. 85.

[745] Digital Millennium Copyright Act, Pub. L. 105-304, 112 Stat. 2860 (1998), § 1201(c).

[746] Herman, p. 181.

[747] Herman, p. 182.

[748] See Part VIIB.

[749] Hilderbrand, p. 106.

[750] DeCSS publicizers were aggressively pursued by the MPAA, but the program is so short and simple, it was nearly impossible to suppress. Gillespie, pp. 172-173. Fair use of DeCSS was rejected in *Universal v. Corley*, where the court stated, "the DMCA does not impose even an arguable limitation on the opportunity to make a variety of traditional fair uses of DVD movies, such as commenting on their content, quoting excerpts from their screenplays, and even recording portions of the video images and sounds on film or tape by pointing a camera, a camcorder, or a microphone at a monitor as it displays the DVD movie. The fact that the resulting copy will not be as perfect or as manipulable as a digital copy obtained by having direct access to the DVD movie in its digital form, provides no basis for a claim of unconstitutional limitation of fair use." The degradative effects of such actions on preservation were not considered by the court. *Universal City Studios, Inc. v. Corley*, 273 F.3d 429 (2001), at p. 459. See also *321 Studios v. Metro Goldwyn Mayer Studios, Inc.*, 307 F. Supp.2d 1085 (2004); *RealNetworks, Inc. v. DVD Copy Control Association, Inc.*, 641 F. Supp.2d 913 (2009).

gives a new right to prohibit citizens from gaining access to those works for the purposes of making a fair use."[751] To a certain extent, this can also act as a perpetual backdoor enforcement of copyright for works released only on DVD, since even if the works were in the public domain, de-encryption tools enabling access to them would still be illegal.[752] The same would be true of any digital audiovisual file with access encryption – indeed, of any copyrighted digital file with access encryption at all. DRM restrictions do not distinguish between fair use and legitimately infringing behavior; they are incapable of doing so. They prevent actions, or demand permission for those actions, regardless of the user's motives.[753] Fair use is built upon human judgment and consideration. It is exceedingly difficult to govern via code built on binary decision-making. Once-permissible usages outside the control of copyright holders, such as private home copying and interlibrary loan, are quashed through DRM restrictions.[754] The DMCA's provisions on anti-circumvention, furthermore, criminalized the act of engaging in a fair usage of DRM-protected media.

DRM also strips users of the right of first sale, a copyright limitation on physical items that has no parallel in the digital world. Physical copies of creative works, according to Fichte's classification, are the rightful property of those who purchased them, and rights of physical property typically include rights of transfer (alienation of goods). However, for creative works, transfer of the work's physical carrier could be interpreted as an act of distribution, which would be subject to restriction by the mechanism of copyright. Rights in physical property thus collide with rights in intellectual property, necessitating clarification in practice. The first sale doctrine, originally articulated by the Supreme Court in 1908[755] and later codified in the Copyright Act,[756] grants physical property owners the right to resell their purchased goods – thus allowing the used book, record, videocassette, and video game markets to continue existing. The first sale doctrine has no validity in a digital context, for two reasons. First, many digital purchases do not result in the creation of property, according to the terms of sale; what the user purchases is often instead a license for personal use.[757] Second, even in cases where a title of transfer does occur in a digital sale,[758] if a user attempted to sell a 'used copy' of such a digital good, no physical item could be transferred. A resale transfer would be merely the making of a digital copy, with or without a corresponding deletion by the original owner. Even where deletion of the previous copy can be

[751] Boyle 2008, p. 106. Italics omitted for clarity.
[752] Boyle 2008, p. 104.
[753] Tushnet, p. 1011.
[754] Tushnet, p. 1011.
[755] *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339 (1908).
[756] 17 U.S.C. § 109.
[757] Examples include the Amazon digital music store and the Steam video game distribution service. For Amazon, see James Huguenin-Love, "Song On Wire: A Technical Analysis of *ReDigi* and the Pre-Owned Digital Media Marketplace". *New York University Journal of Intellectual Property and Entertainment Law* 4 (2014), pp. 1-35, at p. 4. For Steam, see Steam Subscriber Agreement (last updated August 31, 2017). Valve Corporation. Available at < http://store.steampowered.com/subscriber_agreement/ >.
[758] An example is the iTunes Store, which transfers title of digital music files to the customer. Huguenin-Love, p. 4.

confirmed, the first-sale doctrine has been found inapplicable.[759] DRM is thus a means by which copyright holders can exercise control over the last of Fichte's dimensions of a creative work, extending beyond the law itself.

C. Ephemerality

Film, even more than audio, can be ferociously unstable as a transmission medium. Nitrate film stock, the industry standard for the first half of the twentieth century, is imminently flammable, and has resulted in deaths, conflagrations, and massive losses of film heritage.[760] Until the widespread adoption of cellulose acetate safety film in the late 1940s, nitrate film was the only economical film substrate available. While cellulose acetate stock had been developed by 1909, it was so expensive, and degraded so quickly, that it was not implemented as an industry standard for feature films until more stable cellulose triacetate film was introduced in 1949.[761] Nitrate film base is made from nitrocellulose (i.e., guncotton, an explosive) mixed with a plasticizer called camphor; it is so combustible it will burn in the absence of oxygen, and often cannot be extinguished even by submerging in water.[762] Film that does not ignite decomposes by releasing corrosive nitric acid. It begins to stick together into a gelatinous mass and then disintegrates into powder, unless it is kept in cold storage.[763] Some nitrate film stock held in substandard ambient conditions disintegrated after less than twenty years.[764]

Nitrate film survival is thus inherently unlikely in the long term, and its preservation has been, in the past, uneven. Sound films became commercially valuable to studios once more after the debut of television, and as a result, most of those films were transferred to acetate or polyester bases in multiple copies.[765] Silent films had no corresponding market value; a study by the National Film Preservation Foundation in 2013 found that 70% of silent films produced between 1912 and 1929 were totally lost, and another 5% were incomplete.[766] Those that do survive often do so in inferior-quality prints on smaller-size film – itself a type of degradation, as information loss occurs in the relative lack of resolution and image quality compared to original

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[759] *Capitol Records v. ReDigi Inc.*, 934 F. Supp. 2d 640 (S.D.N.Y. 2013).
[760] A partial catalog of nitrate film fire disasters, with death tolls and holdings losses, can be found in "A Calendar of Film Fires". In Roger Smither, ed. *This Film Is Dangerous: A Celebration of Nitrate Film*. Federation Internationale des Archives du Film, 2002, pp. 429-453. See also David Pierce, "The Legion of the Condemned: Why American Silent Films Perished". In Roger Smither, ed. *This Film Is Dangerous: A Celebration of Nitrate Film*. Federation Internationale des Archives du Film, 2002, pp. 144-162, at pp. 152-153.
[761] Slide, pp. 3-5.
[762] Pierce 2002, pp. 150-151; Slide, pp. 1-2.
[763] One of the most fruitful inadvertent preservation finds in film history was uncovered in 1978 in Dawson City, in Canada's Yukon Territory. More than 500 nitrate prints screened at a theater in the city were excavated from a frozen-over abandoned swimming pool, and many were found to be in surprisingly good condition. Slide, pp. 99-101; Sam Kula, "Rescued from the Permafrost: The Dawson Collection of Motion Pictures". *Archivaria* 8 (1979), pp. 141-148.
[764] Pierce 2002, p. 149; Houston, p. 81.
[765] David Pierce, *The Survival of American Feature Films: 1912-1929*. Council on Library and Information Resources, 2013, pp. 5-6.
[766] Pierce 2013, pp. 25-26.

35mm reels.[767] Similarly, color fading of acetate film degrades the image quality; the dye mixtures used to hold color fast to the film base will fade over time to a bright pink.[768] This highlights another essential tension in preservation, as applicable to sound as it is to film: proliferation of copies plays a vital role in ensuring that the intellectual work, or at least much of the work, will survive,[769] but it may do so at the cost of irreparable loss of quality (in terms of resolution or fidelity).

Acetate safety film resulted in fewer deaths at cinema palaces and studio warehouses, but it has its own native degradation process, known as vinegar syndrome. Acetyl groups break from the cellulose chains and form acetic acid (vinegar), making the film brittle and shrinking it; the process is irreversible, and no reliable means of halting it is currently known.[770] Vinegar syndrome can set in within a few decades, making safety film no safer for the lives of the films themselves than nitrate.[771] Other adverse forces include mold growth, shrinkage, color fading, and the deterioration of magnetic soundtracks that accompany some acetate films.[772] Film preservation thus requires more or less constant inspection and upkeep.[773] Digitization or migration onto new stock are the only viable methods of information transfer, and film archivists typically recommend film-to-film transfer as the definitive preservation medium, due to concerns over the quality of digital information capture and the velocity of digital software and format obsolescence.[774] Nevertheless, obsolescence of physical film is still occurring as a result of the move toward digital projection, which is an ongoing process already mostly complete among major cinema houses; analog film will increasingly be the province of specialists in the future.[775]

Videotape formats such as VHS, Betamax, EIAJ, and U-Matic pose preservation problems analogous in many ways to those of sound recording formats. The Library of Congress has amusingly described videotape as "[after] nitrocellulose film…probably the next best medium for a society which did not wish to be reminded of its past."[776] Its chemical composition is similar to that of audiotape – a polymer base with magnetic particles (comprising the information) deposited and held via a polyurethane binder. Correspondingly, it is subject to

[767] Pierce 2013, pp. 29-36.
[768] Slide, pp. 105-107.
[769] Caroline Frick, *Saving Cinema: The Politics of Preservation*. Oxford, 2011, pp. 174-176.
[770] National Film Preservation Foundation, pp. 14-15.
[771] Houston, pp. 84-85.
[772] National Film Preservation Foundation, pp. 13-17; *Television and Video Preservation 1997: A Study of the Current State of American Television and Video Preservation*. Library of Congress, 1997, vol. 1, pp.14-18.
[773] Marc Graser, "Hollywood or Dust". *Variety*, July 31, 2010.
[774] Gracy, p. 154; National Film Preservation Foundation, pp. 42-44; comments by Eric Schwartz in Nancy Weiss et al., "Section 108 Issues Other Than Mass Digitization". *Columbia Journal of Law and the Arts* 36 (2013), pp. 547-566, at p. 552. When I visited the Packard Campus of the Library of Congress in 2016, I took a tour of the facilities and was told that, while mass digitizing (and deaccessioning) of videotape was in process, film-to-film transfer was still considered the gold standard for film preservation.
[775] Karen F. Gracy, "Preservation in a Time of Transition: Redefining Stewardship of Time-Based Media in the Digital Age". Michele Valerie Cloonan, ed. *Preserving Our Heritage: Perspectives from Antiquity to the Digital Age*. Neal-Schuman, 2015, pp. 261-264.
[776] *Television and Video Preservation*, p. 19.

degradation from heat, humidity, mold, or strong magnetic fields.[777] It is also easily damaged mechanically by transport mechanisms in tape-playing machines. However, obsolescence is a more pressing threat for most video formats. The technology to screen old 35mm or 16mm prints is simple and easily recreated from scratch materials, but videocassette players are complex integrated-circuit technologies with hundreds of parts, and dozens of formats have existed since the introduction of two-inch quad magnetic videotape (in the mid-1950s) and commercial videotape cartridges (the first of which was Sony's U-Matic in 1971). Playback machines are no longer made for most formats, and broken machines are difficult and expensive to fix (when possible).[778]

Digital physical media and purely digital video formats perhaps fare better, but are still susceptible to loss. Digital videocassette formats are no more stable than their analog brethren are; professional video formats such as D-1, D-2, and D-3 quickly fell into obsolescence and can degrade or be damaged as easily as analog video.[779] DVD and Blu-Ray materials are subject to delamination, where the disc layers begin to separate from one another.[780] High-quality digital video files can be enormous, which meant early video digitization projects sometimes needed to compress out of necessity; in order to be stored on available and affordable media, lossy video compression algorithms such as MPEG-1 and MPEG-2 were used.[781] Compression, furthermore, is sometimes carried out using proprietary technology, and can introduce artifacts in downstream copies.[782] A veritable menagerie of digital video formats exist, and they must be accommodated by future video playback applications if they are to remain accessible to viewers.

D. Preservation

Early film survival is so poor for a multitude of reasons. The danger of fire and disintegration played a major role, but the degradation process was accelerated by cultural and legal neglect, as well. Silent films were never printed in large numbers, and had little economic value once their theater run was over. This remained true into the broadcast television era; television gave new economic life to talkies, and far more of them were transferred to acetate film and reproduced in larger numbers, but silent film was never seriously considered worthy

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[777] *Television and Video Preservation*, pp. 20-27. Tapes made in 1974-75, during the oil embargo, were made with thinner mixtures and degrade much faster. Hilderbrand, p. 123; Slide, p. 115.
[778] *Television and Video Preservation*, pp. 20-21.
[779] Howard D. Wactlar and Michael G. Christel, "Digital Video Archives: Managing Through Metadata". In *Building a National Strategy for Digital Preservation: Issues in Digital Media Archiving*. Council on Library and Information Resources, 2002, pp. 80-95, at p. 91; "Digitising the BBC Archive". BBC, 2013. Available at < https://web.archive.org/web/20130831095208/http://www.bbc.co.uk:80/academy/technology/article/art20130704121742520 >.
[780] Wactlar and Christel, p. 91.
[781] Wactlar and Christel, p. 82.
[782] Mary Ide, Dave MacCarn, Thom Shepard, and Leah Weisse, "Understanding the Preservation Challenge of Digital Television". In *Building a National Strategy for Digital Preservation: Issues in Digital Media Archiving*. Council on Library and Information Resources, 2002, pp. 67-79, at p. 71.

fare for television.[783] Once motion pictures came under copyright in 1912, deposit of a copy with the Library of Congress was necessary to secure film copyright, but the Library's Prints Division did not have sufficient storage space to handle all the incoming films.[784] Instead, in 1915, the Library announced that motion pictures "could be copyrighted so long as such deposits were made. But the filmmaker was then allowed to borrow back the deposits – for an unlimited time at no cost....Thus, when the copyrights to films expire, there is no copy held by any library. The copy exists – if at all – in the library archive of the film company."[785]

The Library of Congress's borrow-back policy held until 1942, when the Library began accepting full film reels for every registration.[786] During that period, most of the film companies did not archive their work, or archived only works thought to have significant future economic value. Films made by small-scale independent producers and their production companies, most of which are long out of business, often kept better collections of their own films than the large studios did.[787] Old releases took up space in warehouses, which cost money and provided no return on investment, and so vast quantities of them were simply thrown away.[788] Celluloid could be scrapped for silver, and legal contracts for film remakes sometimes required the destruction of the previous work, since older expressions of the same story could serve as possible marketplace competition.[789] Copyright's reliance on the deposit requirement (weakened here by the negligence of the Library of Congress)[790] helped ensure that at least one copy of a work would be held by a preservation institution. This formality, when implemented properly, helps to safeguard public access even if a work falls out of print, and makes it possible to reproduce the work once it has passed out of copyright control. Failure to abide by the deposit principle meant that only one copy of the creative expression ever need be made, and if it were damaged – whether by inherent vice, human carelessness, vandalism, or Act of God – that expression disappeared forever.

Television, no less than film, has seen the loss of shockingly important footage. Much early television was broadcast live and thus never recorded at all; the capacity to do so was impractical until kinescopes were introduced in 1947, and was uncommon until some time after

[783] Pierce 2013, p. 10.
[784] Slide, p. 36.
[785] Lessig 2004, p. 111. See also Frick, pp. 41, 186.
[786] Frick, p. 45.
[787] Pierce 2013, pp. 42-46.
[788] Pierce 2013, p. 6; Houston, p. 16. The exception is MGM, the only major studio to recognize the value of its holdings; it kept its prints and began preserving them in the 1960s, with the result that well over half of its production of silent films survives. Pierce 2013, p. 22. Frick (chapter 2) challenges this narrative, noting that certain studios put at least some archival effort into their studio libraries, but the comprehensiveness of their retention efforts and their standards of care were nevertheless often subpar; furthermore, access to the films was (and is) impossible unless and until the studios broadcast the films or offered them on home video.
[789] Pierce 2002, p. 145.
[790] Failure to budget for preservation also resulted in major losses; according to Anthony Slide, the Library of Congress had no funds for film copying in the 1950s, and so inspected and discarded deteriorating reels, throwing out about 50% of them. Slide, p. 41.

quad video's introduction in 1956.[791] Broadcast tapes, bulky and costly, were routinely 'wiped' (erased and reused) to save materials until the 1970s, when the rise of home video demonstrated economic value in preservation of older broadcasts. The BBC's lost holdings, for example, are well documented; they include four of the six episodes of *The Quatermass Experiment* (a pioneering science-fiction show), news coverage of the Apollo 11 landing,[792] and most 1960s- and early 1970s-era episodes of *Top of the Pops*, among them the last television appearance of the Beatles.[793] ABC saw insufficient value in its kinescope holdings and discarded them all in 1968.[794] The cultural value of televised news was mostly disregarded until the election of 1968, which led to the establishment of the Vanderbilt Archive; even long after this, local news broadcasts were routinely destroyed or thrown out.[795] Surviving footage, on film (pointed at the television screen) or videotape, is often held by private citizens – that is, bootleggers – whose holdings have been actively sought by broadcasters and archives.[796] Notably, Game 7 of the 1960 World Series (preserved on kinescope by Bing Crosby)[797] and Super Bowl I (on quad tape) have survived in this way, though the Super Bowl I footage is still held only by its physical owner.[798]

The cultural worth of film was generally disregarded in its early decades, often seen as light, mass-produced popular fare that had little lasting value to well-cultured minds. Yet the desirability of large-scale film preservation efforts was recognized more quickly, and more comprehensively, than for audio. Intellectuals and policymakers were gradually persuaded of film's evidentiary importance for history and its contribution to American cultural life, but film preservation got underway so rapidly at least in part because the instability of nitrate film is so extreme.[799] Initiatives to establish a film preservation institution at the national level date back as far as 1921, and the National Records and Archives Administration began taking in historical and government-made films in 1934.[800] Institutions such as the Museum of Modern Art Film Library (1935), the British Film Institute National Archive (1935), and the Library of Congress (which began taking in all film copyright deposits in 1942), were early leaders in advocating for film preservation, developing best practices, and identifying and searching for missing films.

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[791] *Television and Video Preservation*, vol. 1, pp. 14-15, 41-43; Slide, pp. 114-115.
[792] Houston, pp. 143-144.
[793] "Unique Beatles Recording Lost". BBC News, July 7, 2000. Available at < http://news.bbc.co.uk/2/hi/uk_news/823988.stm >. Further examples are given in Reese 2012, pp. 292-293.
[794] Slide, p. 116.
[795] *Television and Video Preservation*, vol. 1, pp. 7, 88-89.
[796] For instance, the BBC Archives held an "archive treasure hunt" for years, asking viewers to send in materials "so that we can have them back and they can be preserved for the enjoyment of generations to come." The station offered "a modern format copy in return". BBC, "About Treasure Hunt". Available at < http://archive.li/nNWpf >.
[797] Richard Sandomir, "In Bing Crosby's Wine Cellar, Vintage Baseball". *New York Times*, September 23, 2010.
[798] Richard Sandomir, "Out of a Rare Super Bowl I Recording, a Clash with the N.F.L. Unspools". *New York Times*, February 2, 2016.
[799] Frick, at pp. 79-80, 84, notes that the preservation rhetoric that accompanied publicizing of such efforts was often drastic in tone; professional preservationists have a stake in portraying their work as a bulwark against perpetual crisis. Yet nitrate film's flammability makes it perhaps the medium most worthy of such stridency; not only has it resulted in the mass annihilation of intellectual works, but it has also repeatedly destroyed buildings and killed people.
[800] Frick, pp. 29-34.

Subsequent federal establishments supporting this work included the American Film Institute (1968), the National Film Preservation Board (1988; Foundation established 1997), and the Library of Congress's new campus dedicated entirely to audiovisual preservation (sound, film, video, and video games) in Culpeper, Virginia in 2007. A large number of other major museum and archival entities now do work in film and/or video preservation, including the George Eastman Museum, the Paley Center for Media (established by CBS president William Paley), the Museum of Broadcast Communications, the Vanderbilt Television News Archive, and UCLA's Film and Television Archive.[801] The reach of what was considered worthy of preservation has also gradually expanded – at first primarily feature films, but eventually encompassing newsreels, television programs of all sorts, independent and avant-garde films, ethnic-market films and shorts, anthropological footage, and even pornography.[802]

The establishment and continued operation of some of these archives occasionally had significant copyright implications. The Vanderbilt Television News Archive began recording broadcasts of the three major national news networks in late 1968, and was explicitly envisioned as a public service for preservation and critical analysis of news. Up to that point, all of the major networks had been erasing their broadcast tapes after two weeks.[803] The Archive was sued by CBS in 1973 for compiling and copying news broadcasts for patrons; its defense relied heavily on First Amendment grounds, claiming a legitimate interest in providing access to public information.[804] This case, which was ongoing as the Copyright Act of 1976 was debated, influenced the wording of the law's text, which exempted audiovisual archives specifically from facing infringement suits for making limited numbers of copies of news programs.[805] The National Film Preservation Board (NFPB) was created in response to clamoring from directors who wished to assert moral rights against the colorization efforts of television broadcasters such as Ted Turner. This institution, and its accompanying National Film Registry, were set up as a means of banking unaltered versions of films, and were "designed mainly as enforcement mechanisms for the preservation of motion picture content; archival preservation was an afterthought."[806] The 1988 law that established the NFPB was ultimately a defeat for moral-rights champions, who were unsuccessful in establishing anything other than a labeling requirement for altered films that expired three years later.[807] Some major studios now have well-developed film and television archives for their own holdings; aside from MGM's, these are primarily recent establishments, coming after the economic value of reissuing legacy works for

[801] Houston, p. 18; National Film Preservation Foundation, p. 1; *Television and Video Archives*, pp. 79-86; Justin Hughes, "Traditional Knowledge, Cultural Expression, and the Siren's Call of Property". *San Diego Law Review* 49 (2012), pp. 1215-1266, at p. 1245.
[802] Slide, pp. 89-99.
[803] Slide, p. 118.
[804] Hilderbrand, pp. 117-118.
[805] 17 U.S.C. § 108(f)(3); Hilderbrand, p. 140. The suit was dropped in late 1976.
[806] Brian Real, "From Colorization to Orphans: The Evolution of American Public Policy on Film Preservation." *The Moving Image* 13 (2013), pp. 129-150, at p. 129.
[807] Real, pp. 135-136.

home video, rental, and cable television became apparent.[808] Rarely are their holdings made available to researchers or the public outside of ordinary commercial distribution and transmission channels.

Studios and archival institutions had a curiously antagonistic relationship for many decades; several commentators have noted tensions due to studios' distrust of archives as potential sources of piracy.[809] In the later twentieth century, studios began to warm to archives, which, after all, were proclaiming to the public the indelible value of the studios' output. Some began to use archives like surrogate repositories; they would often receive a tax break for depositing physical copies of their holdings, which the archives had responsibility to maintain and preserve (usually at the archives' own expense), but the studio would retain all intellectual property rights on these copies.[810] To some extent, the preservational shortsightedness of film and television studios is something no one should take as unexpected, even if they are creators and ultimate guardians of enormous tracts of cultural heritage and public information; as a CBS producer put it, "The name of the organization is CBS News. It's not the CBS Public Library."[811] While rightsholding businesses can be encouraged to donate to archives or to set up nonprofit foundations as a charitable action, there is no business case to be made by expecting them to permanently safeguard the things they create, when so many of those things cost them money to maintain without return. Such a strategy may result in their being taken over by a company that will either monetize those holdings or junk them.[812] This illustrates even more the need for copyright philosophy (and policy) to legitimate the actions of others who are willing to take on long-term preservation and maintenance roles – and perhaps, even, for rightsholders to admit the value of agreeing to limitations on the copyright grant.

As with music, preservation of film and video is carried out by a variety of non-rightsholding entities. Libraries and archives do much of this work, and now that there are concerted international efforts to identify and preserve at-risk films, these institutions play a larger role for film than they have for sound. Stock footage houses hold important collections of commercially oriented film, some of which is available nowhere else.[813] Persons involved with the making of the film sometimes saved their own products. Directors, actors and actresses occasionally kept large film collections; Cecil B. DeMille and Mary Pickford accumulated

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[808] Gracy, p. 24; *Television and Video Preservation*, pp. 46-49. *Television and Video Preservation* discusses 1990s-era studio preservation policies in some detail.
[809] Houston, p. 37; Gracy, p. 45; Pierce and Schwartz, p. 139; Slide, p. 45.
[810] Slide, pp. 149-151; Gracy, pp. 48-49.
[811] Perry Wolf, quoted in *Television and Video Preservation*, p. 55. A similar sentiment was given by 20th Century Fox executive Sid Samuels: "Economics is always a factor to be contended with. We're not a museum. We're not an archives supported by public funds. We're a commercial company that has to account to its chairman, its board of directors and, beyond them, to its stockholders." Slide, p. 154.
[812] If it does result in preservation actions being taken (even so much as the benign neglect of failing to throw things away), "[j]ust because a film is 'preserved' by Paramount or Universal on their studio lots, in their studio vaults, does not necessarily mean that the film is adequately preserved for posterity." Slide, pp. 152-153.
[813] Gracy, p. 25.

collections that later became important preservation sources.[814] An important secondary source of preservation, just as with early sound recordings, was private collectors, who sometimes obtained material found nowhere else in the historical record, and some of whom parlayed their collections into curatorships once formal institutions had been established.[815] The original cut of *Metropolis*, for instance, approximately 25 minutes longer than any previously-known print, was rediscovered in 2008 in Argentina, having been purchased and brought there by a film critic who had seen it at its Berlin premiere in 1927.[816] Informal cinema clubs had been established across the nation in the 1920s, and casual screenings in theater halls, churches, and other civic establishments increased the number of prints that would eventually find their way into the hands of collectors.[817] These collectors often refused to donate their collections to archives unless they would be provided with a copy to take back home, a process not permitted under Section 108 and by no means a secure fair use argument (though often done in practice anyway).[818] Home tapers, tape traders, and video rental stores provide access, some of it unauthorized, to broadcasts and out-of-print movies;[819] in the past decade, many of these holdings have cropped up on YouTube. As with music, many videotape distributors specifically concentrated on duplicating materials no longer commercially accessible.[820] Until the release of entire seasons of television content on DVD became de rigueur in the 2000s, tape traders and bootleg purveyors, some of whom systematically taped every episode of desired shows (known as 'librarying'), were the only means of access for non-syndicated network and cable programs.[821] Tape traders often asserted that their actions were noninfringing, but more likely, Mergesian nonenforcement kept them out of formal legal trouble.[822]

Bootlegging and unauthorized distribution keeps video material alive, just as it does audio. Tape-trading communities, and, later, YouTube, proliferated copies of audiovisual works, provided access to them as sources of information, kept the works alive in the public memory, and even created markets for them.[823] For instance, the Todd Haynes film *Superstar*, a documentary of Karen Carpenter's life using Carpenters songs and told with Barbie dolls, was never brought to market after Haynes received cease-and-desist letters. Nevertheless, the work circulated widely on home video and is (as of this writing) available in full on YouTube,[824] having paradoxically become a touchstone work among Carpenters fans and film theorists despite its fundamental illegality – or, perhaps, as a result of the exposure brought by legal

[814] Pierce 2013, pp. 46-47; Gracy, pp. 56-58.
[815] Pierce 2013, pp. 47-48; Gracy, pp. 27-28; Frick, p. 105.
[816] Larry Rohter, "The Full 'Metropolis'". *New York Times*, May 5, 2010.
[817] Frick, pp. 36-37.
[818] Slide, pp. 45-46.
[819] Hilderbrand, pp. 12-13, 62-64.
[820] Hilderbrand, p. 64.
[821] Hilderbrand, pp. 73-75, 88, 97.
[822] Hilderbrand, p. 63.
[823] Hilderbrand, pp. 22-23.
[824] Available at < https://www.youtube.com/watch?v=tdcN-1M1fSs >.

attempts to stop its distribution.[825] YouTube generated massive new audiences for old media (both audio and video), even though its fundamental instability as a distribution medium is profound. The website is shielded from contributory infringement charges by the DMCA's safe harbor provisions, but is under no obligation to accede to user claims that any particular upload is fair use; rather, it allows rightsholders broad and direct access to its video controls, allowing those rightsholders to choose to monetize or take down videos as they see fit.[826] YouTube, of course, plays host to an ocean of new video content as well, and churn of availability is constant; videos are here one day, gone the next, without thought of systematic archiving, even for works with artistic, historical, or cultural significance.[827] Ultimately, this is true of every other Internet distributor of audiovisual content. Sites such as Ebaum's World, Newgrounds, and Albino Blacksheep, which hosted user-generated Flash videos in the early 2000s, presaged the heyday of the short video clip as a medium of expression, and some of their more popular videos have subsequently found their way onto Youtube (and off, and on again). The collapse of Vine led to an outpouring of anguish over the loss of the culture it created through short video, and eventually, Twitter (Vine's parent company) restored its videos to a historical site it calls an "archive".[828]

The orphan works problem is particularly relevant to moving image preservation. Early film studio releases, home videos, and anonymous user-submitted videos on websites like YouTube, Vine, Vimeo, and Instagram are all examples of creative audiovisual works that often fall into the class of orphan works. Prospective users of those works – people who would like to reissue or redistribute them, remaster or digitally preserve them, make derivative works from them, or publicly perform or display them – are legally enjoined from doing so without permission, but this permission cannot be granted if the copyright holder is not known, cannot be located, or no longer exists. No overt right has been asserted, nor have negotiations between user and rightsholder broken down; the parties are unaware of each other's existence.[829]

The orphan works condition arises from a number of circumstances. In some cases, the work itself has no copyright or author identifying information attached to it, or insufficient

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[825] Hilderbrand, chapter 4. This is sometimes known as the 'Streisand Effect', after Barbra Streisand sued to shut down a website hosting a photo of her coastline home, alleging a violation of privacy. Publicity surrounding the suit resulted in massive public interest in the photo. Robert Siegel, "'Streisand Effect' Snags Effort to Hide Documents". *NPR*, February 29, 2008. Available at < https://www.npr.org/templates/story/story.php?storyId=87809195 >.

[826] Decherney, p. 233. It's nevertheless common to see users posting fair use disclaimers on videos, even for usages that seem rather unlikely to survive a challenge. For instance, I sometimes see posted videos containing audio of the entirety of in-print albums from popular musical artists, with a claim that fair use applies because the usage is not commercial, and an exhortation to listeners to buy the album if they like it. If fair use is confusing to the American public, there is no better illustration of that confusion than YouTube uploader comments. Joseph P. Liu has suggested this large-scale lack of understanding represents a failure to communicate notice of copyright's property scope to users of copyrighted works; see Liu 2016.

[827] Hilderbrand, pp. 225, 233; Frank Rose, "The Mission to Save Vanishing Pixels". *New York Times*, October 23, 2016.

[828] Andrew Dalton, "The Vine Archive Will Keep the Videos Looping Forever – Or Until Twitter Pulls the Plug, Anyway." *Engadget*, January 20, 2017. Available at < https://www.engadget.com/2017/01/20/vine-archive/ >.

[829] Register of Copyrights 2006, p. 1.

information to begin a search for prospective owners. The removal of notice and registration formalities in 1976 and subsequently (in preparation for accession to the Berne treaty, completed in 1988) increased the number of works for which this scenario is applicable.[830] In some cases, the chain of custody of the copyright is unclear, because there is incomplete recordkeeping by the rightsholders, who may not know they are the rightsholders or may believe someone else holds the rights. In others, the contractual agreements between creators and publishers are vague (e.g., about whether the work was made as a work for hire or by an independent contractor), or the legal transfer of rights is obscured by the deaths of owners or the dissolution of corporations. This increases tracing costs for prospective users, often thwarting the potential economic benefit the user sought by attempting to employ the work in the first place.[831] Libraries and archives, in particular, often take in collections comprised of large quantities of orphan works (e.g., private letters, photographs, home movies, e-mails, and websites), often with little identifying information, let alone copyright tracing documentation; these are often simply not made available to the public in order to avoid legal quagmires.[832]

Orphan works problems are endemic to film holdings, since rights transfers between studios, as with independent record labels, are often hard to uncover. Copyright chains of custody for advertising reels and commercials, newsreel footage, documentaries, educational films, amateur films, and anthropological or ethnographic footage are often just as difficult to trace.[833] Furthermore, film titles are rarely uniform, and many films in archives (or attics) have no title, or exist unlabeled or with insufficient metadata to identify and contextualize them properly. In some cases, once-lost films have been rediscovered unlabeled or labeled with alternate titles, often in other countries (where the film may reside sitting in a canister with a local-language title).[834] A famous example is the 1927 film *The Unknown*, starring Lon Chaney, whose lone surviving print was found decades later in a French archive, buried in a box of film canisters labeled *Inconnu* ("unknown").[835] Oftentimes, film footage can be identified as valuable simply by watching the film; identifying its copyright claimant(s) is a far more challenging task, especially for films made after the elimination of copyright registration formalities.[836]

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[830] Register of Copyrights 2006, p. 23. One of the most common examples of this is photographs, especially family photographs and the holdings of photograph archives and museums. Register of Copyrights 2006, pp. 24-25. It is also relevant to mass digitization projects, for which the volume of individual permissions that must be sought is prohibitively expensive if the use is not fair. Register of Copyrights, "Orphan Works and Mass Digitization". United States Copyright Office, 2015, p. 1.
[831] Register of Copyrights 2006, pp. 27-31.
[832] David R. Hansen, Kathryn Hashimoto, Gwen Hinze, Pamela Samuelson, and Jennifer M. Urban, "Solving the Orphan Works Problem for the United States". *Columbia Journal of Law & the Arts* 37 (2013), pp. 1-55, at pp. 3, 9.
[833] National Film Preservation Foundation, p. 3; Claudy Op den Kamp, "Copyright and Film Historiography: The Case of the Orphan Film". In Matthew David and Deborah Halbert, eds. *The Sage Handbook of Intellectual Property*. Sage, 2014, pp. 404-417, at p. 407.
[834] Pierce 2013, p. 55.
[835] David Skal and Elias Savada, *Dark Carnival: The Secret World of Tod Browning – Hollywood's Master of the Macabre*. Anchor Books, 1995, p. 116.
[836] Op den Kamp, pp. 408, 410.

The term *orphan works* in fact has its genesis in moving image scholarship; film archivists began referring to *orphan films* widely in the early 1990s, in the midst of skirmishes over colorization and the development of the National Film Preservation Foundation.[837] Copyright reform advocates broadened the term to cover all works, and extended (or blurred) the term's meaning to refer both to works kept out of print or improperly preserved by copyright holders and works whose copyright holders are unknown.[838] Usage within the film community also widened; orphan film conferences expanded the term (and the related, but ill-defined, concept of *neglect*) to refer to any work outside mainstream production and distribution channels and/or outside the general purview of film scholars, works "unseen or not part of the universe of knowledge about moving images",[839] regardless of copyright or preservation status. The efforts of film preservationists led to a small legislative victory on behalf of libraries and archives in the form of the Preservation of Orphan Works Act of 2005, which extended Section 108(h)'s provisions on reproduction, distribution and performance of works nearing the end of their copyright life to audiovisual works (as well as to musical works and to pictorial, graphic, and sculptural works).[840] Nevertheless, the orphan works issue remains a significant copyright policy problem in the United States for works in any creative medium.

VI. Video Game Copyright

While rudimentary representations of simple board or parlor games were created for computers in the early 1950s, the earliest video games were primarily created to assist in research or to demonstrate processing power. Even games that were created purely for entertainment, such as *Tennis for Two* (1958), which ran on a modified oscilloscope, were considered so simple and obvious that their creators did not seek intellectual property protections over them.[841] The first widely distributed computer gaming artifact was probably *Spacewar*! (1962), which ran on a PDP-1 mainframe computer, but at this stage, video games had no foreseeable economic or artistic viability; most were curiosities created to be freely shared on machines so large and expensive they could only be purchased by institutions. The commercial introduction of video games began in the late 1960s with the development of hybrid electro-mechanical cabinet arcade games, which used electronic circuitry to control mechanical parts of the type previously used in pinball and other amusement games. 1972 was a watershed for video games, as the first home console (the Magnavox Odyssey) and the first hit arcade video game, *Pong*, both debuted that year. As with sound recordings and film, the intellectual property implications of video games were at first unclear. The Supreme Court held in 1972 that software in general was not subject to patent protection as a novel, useful process; at that time, code was

[837] Dan Streible, "The Role of Orphan Films in the 21st Century Archive". *Cinema Journal* 46 (2007), pp. 124-128.
[838] Streible 2007, p. 127.
[839] Dan Streible, "The State of Orphan Films: Editor's Introduction". *The Moving Image* 9 (2009), pp. vi-xix, at p. x.
[840] Pub. L. 109-9, 119 Stat. 227 (April 27, 2005).
[841] Kyle Gross, "Game On: The Rising Prevalence of Patent-Related Issues in the Video Game Industry". *SMU Science and Technology Law Review* 12 (2009), pp. 243-274, at p. 245.

held to be a mathematical algorithm and thus ineligible as an abstract idea.[842] *Pong*, in fact, wasn't built on software at all; the game was built entirely out of a set of (patentable) logic circuits that resulted in a manipulable output.[843] Whether simple software-based games even contained enough originality to qualify for copyright remained an open question.[844]

Ultimately, like sound recordings and moving image works, video games became subject to separable copyrights for different constituent elements. Copyright protection of video games as creative literary works – that is, protection of video game *source code* – arrived when software in general was added to the list of copyrightable expressions via the Computer Software Copyright Act of 1980.[845] Protection of video games' *audiovisual* content arrived through a series of lower court decisions in the early 1980s, including the 2nd Circuit decision in *Stern Electronics v. Kaufman*,[846] the 3rd Circuit decision in *Williams Electronics v. Artic International*,[847] and the 7th Circuit decision in *Atari v. North American Philips Consumer Electronics*,[848] all in 1982.[849] The *Stern* case established much of the basic reasoning governing video game copyright. Audiovisual elements of a game are the principal user experience; if copyright applied only to source code, artistic elements of gameplay, sound effects, and visual design would be essentially unprotectable; look-alike games could be created from *sui generis*

[842] *Gottschalk v. Benson*, 409 U.S. 63 (1972). Per the precedent set by *Baker v. Selden*, 101 U.S. 9 (1879), software appeared to be a functional process, making it the subject of patent, rather than copyright. Pamela Samuelson, "A Square Peg in a Round Hole? Copyright Protection for Computer Programs". In Brad Sherman and Leanne Wiseman, eds. *Copyright and the Challenge of the New*. Wolters Kluwer, 2012, pp. 251-271, at p. 253.
[843] The hardware and game mechanics upon which *Pong* was based were, in fact, patented in 1969 and licensed by Magnavox, who used them in a game called *Table Tennis*, issued in 1972 for the Odyssey. After Atari released *Pong* a few months later, Magnavox demanded and got its own licensing fees. *Pong* itself was widely copied by other game companies, and one such company brought an infringement action against another such company regarding the *copyright* of its *printed circuit design drawings*. While this action was unlikely to have succeeded, the case was settled quickly before decision of merits. William K. Ford, "Copy Game for High Score: The First Video Game Lawsuit". *Journal of Intellectual Property Law* 20 (2012), pp. 1-41; see also Gross, pp. 246-247.
[844] This question was answered in *Atari Games v. Oman*, 979 F.2d 242 (9th Cir. 1992), which affirmed Atari's copyright in the game *Breakout*, sixteen years after its initial release. The Copyright Office had denied Atari registration for *Breakout* when the company first attempted to register it in 1987. Greg Lastowska, "Copyright Law and Video Games: A Brief History of an Interactive Medium". In Matthew David and Deborah Halbert, eds. *The Sage Handbook of Intellectual Property*. Sage, 2014, pp. 495-514, at p. 500.
[845] Pub. L. 96-517, ch. 38, § 10(a), 94 Stat. 3015 (1980). This piece of legislation materialized at the suggestion of the Commission on New Technological Uses of Copyrighted Works (CONTU), a committee created to study the impact of photocopiers and computer technologies on copyright. CONTU was to issue follow-up guidelines on these technologies for later amendment of what became the Copyright Act of 1976, since it had become clear by 1974 that addressing these technologies in the new legislation might lead to yet more protracted delays for a bill that had been more than a decade in the works. CONTU asserted that software already met the requirements of literary works as the 1976 Act defined them (though its report betrays a lack of expertise on how software actually works), but recommended that Congress take action to affirm software copyright anyway. Samuelson 2012, pp. 256-257.
[846] 669 F.2d 852 (2nd Cir. 1982).
[847] 685 F.2d 870 (3rd Cir. 1982).
[848] 672 F.2d 607 (7th Cir. 1982).
[849] Pamela K. McKenna, "Copyrightability of Video Games: *Stern* and *Atari*". *Loyola University Law Journal* 14 (1983), pp. 391-413.

code.[850] The defendant in *Kaufman* also questioned whether audiovisual elements of games were fixed in the sense required by copyright, since they "vary depending upon the actions taken by the player".[851] The court held that the representation of these elements in the audiovisual display, as created by the interaction between the generative rules of the source code and the user's responses to that code, had sufficient stability to qualify for protection.[852]

Because video games are (or have become) immensely complex, multifaceted cultural products, the source code and audiovisual elements do not exhaust the copyright possibilities for a game. For instance, audiovisual aspects of a game are myriad and may overlap each other. Separable copyrights may be available for different display design features, such as backgrounds, characters, usable in-game objects, and maps. Music or sound effects used in the game, as with film soundtracks, can be subject to their own copyright (for both the composition and the recording); if the music in the game is preexisting, it is subject to a synchronization license, just like film and television. Narrative or scripted elements of games may qualify for separate literary protection. Even motion-capture aspects of the game could potentially have discrete protection as a dramatic work of dance.[853]

In the four following subsections, I will carry out an analysis parallel to those of audio recordings and moving images above. First, I will briefly outline video game copyright duration, which, unlike the previous examples, is, in the main, prototypical for modern copyrighted works. Second, I will highlight peculiarities of video games as creative objects that make concepts such as moral rights and creator-centered authorship difficult to apply to them, and note parallels between video games and moving images in the realms of fair use, first sale, and DRM. Third, I will discuss the unique qualities of video games as digital objects subject to degradation and obsolescence. Fourth, I will detail challenges inherent in game preservation facing institutions that wish to do so, and underscore the importance of non-rightsholder contributions to preserving video games and game history.

A. Duration

Unlike sound recordings and films, video games fall into the ordinary classes of copyright duration. As works that became copyrightable after 1976, video games are subject to the standard term of protection afforded all other copyrightable expressions. Per the 1998 extension, the term is life of the creator plus 70 years, or 95 years from publication for works of corporate authorship. The majority of video games fall into the latter term of protection. This

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[850] Jethro Dean Lord IV, "Would You Like to Play Again?: Saving Classical Video Games from Virtual Extinction Through Statutory Licensing". *Southwestern University Law Review* 35 (2006), pp. 405-430, at p. 413. The reasoning follows on the "total concept and feel" test for substantial similarity as delineated in *Sid & Marty Krofft v. McDonald's*, 562 F.2d 1157 (9th Cir. 1977).
[851] 669 F.2d 852 (2nd Cir. 1982), at p. 855.
[852] Lord, pp. 412-413.
[853] "Intellectual Property Rights and the Video Game Industry". White paper. International Game Developers Association, 2003, pp. 30-31.

applies to all video games released after the passage of the Computer Software Copyright Act of 1980, and presumably to works released between January 1, 1978 (the effective date of the Copyright Act of 1976) and 1980. Older works that were registered for copyright would receive protection, though there are possibly some small number of early game works from before 1976 that could have entered the public domain due to failure to follow formalities. Thus, essentially the entire history of video games is copyrighted, aside from works placed in the public domain by programmers. Most computer and console video games released in the decade of the 1980s, for instance, will be copyrighted until at least the mid-2070s. The length of video game copyright is more than an order of magnitude longer than the period of active economic viability of the average game system; as the Library of Congress has noted, "[c]opyrights held by corporations endure for up to 120 years…. A video game console generation typically lasts less than a decade."[854]

It may be the case that a somewhat larger share of video game works are either public domain or have been released under minimally-restrictive licensing agreements, as a result of the longstanding culture of openness in computer programming. The free software movement, spearheaded by Richard Stallman's GNU Project (started in 1983), encouraged programmers to release code without copyright restrictions or with a *copyleft* license; under copyleft, sharing, distribution, and modification are often permitted, but with the stipulation that any downstream instance of that code must be subject to the same permissions. Stallman's GNU General Public License (GPL) for software[855] was written in 1989 and formed the basis for later copyleft and public licenses that could apply to larger classes of works, including the GNU Free Documentation License (for text works) and the licenses developed by Lawrence Lessig's Creative Commons organization (for any creative work). Works released under these licenses are much easier to archive and preserve, because the legal needs of persons or institutions who wish to copy and preserve the works are usually granted by the terms of the license. For example, the GPL permits unlimited copying and modification of code (so long as those modifications are also licensed under the GPL), which would allow a media archivist to back copies up to multiple systems and to adjust the code in order to have it run on newer operating systems. Nevertheless, despite Stallman's wishes,[856] a great deal of commercial video game software of historical, aesthetic, and cultural interest is held under standard copyright control.

B. Scope

Video game copyright scope, like its duration, is ordinary, in the sense that it does not diverge from the strictures and exemptions governing other creative works like books and photographs. However, as a medium, its idiosyncrasies of fixation and creative genesis suggest problems with copyright's assumptions regarding the boundaries of the work being protected and

[854] Jerome McDonough, et al. "Preserving Virtual Worlds: Final Report". Library of Congress, 2010, p. 52.
[855] The third iteration of this license, released in 2007, is available at < https://www.gnu.org/licenses/gpl.html >.
[856] See, e.g., Richard Stallman, "Why Software Should Be Free". In Deborah Johnson and Helen Nissenbaum, eds. *Computers, Ethics, and Social Values*. Prentice Hall, 1995, pp. 190-200.

how rights are parsed out between persons involved creatively with games and gaming. Additionally, video games further highlight problems presented to preservation actors when faced with the one-two punch of digital rights management and the Digital Millennium Copyright Act. Even more than with moving image works, legal and technical measures designed to prevent and criminalize copying pose serious challenges to the preservation of video games as historical and cultural artifacts; licensing and contract considerations, too, serve to thwart game preservation before it can start.

The idea/expression dichotomy is at least as difficult to draw for video games as for any other work. What constitute *scenes a faire* or plot conventions for video games often seem invariably tied to the success of specific games (or the film and television works that often inspire them).[857] Since portions of video game code and design are fundamentally functional or systems-based in nature, these must be separated out of the analysis of the creative components of the work as unprotectable by copyright, though novel and non-obvious functional elements can be (and often are) patentable.[858] Would any game meet standards of creative expression meriting copyright protection? Early court decisions wrestled with these concepts, often issuing more or less mutually conflicting opinions in different judicial venues.[859] Two 1992 circuit court rulings set a precedent that software, as a primarily functional medium, receives a relatively thin scope of copyright protection.[860] One of these, *Computer Associates v. Altai*, established a method of analysis for software infringement cases known as the abstraction-filtration-comparison test. Copyright infringement of similar works is carried out in three steps: first, the court sorts the code into levels of abstraction in order to identify which portions of the program can be considered ideas and which expressions. Then, unprotectable elements of the works are filtered out at each level – for instance, functional aspects, standard programming practices, and public-domain components. After these two steps are taken, the works are compared for substantial similarity.[861]

The inherently collaborative nature of much modern creation is apparent in aspects of sound recordings; it is manifest in the work-for-hire status of a preponderance of film and television output. Studio-produced video games represent an extreme case of collaborative

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[857] Lastowska, at p. 504, discusses the reasoning behind *Atari v. Amusement World*, 547 F. Supp. 222 (1981), which concerned the substantial similarity of *Meteors* to the hit arcade game *Asteroids*, itself essentially a simplified re-creation of a scene from *Star Wars: A New Hope*. The Ninth Circuit decision *Data East v. Epyx*, 862 F.2d 204, 9 U.S.P.Q.2d (BNA) 1322 (9th Cir. 1988), analyzed substantial similarity between two karate video games and found no infringement due to merger of idea and expression. See also John Kuehl, "Video Games and Intellectual Property: Similarities, Differences and a New Approach to Protection". *Cybaris: Intellectual Property Law Review* 7 (2016), pp. 313-349, at pp. 328-332, discussing the merger doctrine and *scenes a faire* in relation to *Tetris Holding v. Xio Interactive*, 863 F. Supp. 2d 394 (D.N.J. 2012).

[858] Samuelson 2012, p. 261; Gross, pp. 247-253. The functional elements of *Pong*, for instance, were the subject of patent infringement litigation into the late 1990s. Ford, pp. 36-38.

[859] Lastowska, pp. 503-507.

[860] *Computer Associates v. Altai*, 982 F.2d 693 (2nd Cir. 1992); *Sega Enterprises v. Accolade*, 977 F.2d 1510 (9th Cir. 1992). See also Samuelson 2012, pp. 262-265; Boyle 2008, pp. 165-166.

[861] Samuelson 2012, p. 263.

creation. While there is a noteworthy and still-growing community of independent video game programmers who create games alone or in small creative groups, the complexity of game creation at the commercial level frequently results in dozens or hundreds of hands being at work in a single release. More than for perhaps any other creative medium yet devised, the romantic author is minimally present in video game development.[862] Since computer software has primarily been couched legally as functional and commercial in nature, moral rights in software have often been curtailed even in countries that have granted broad moral rights protections. The UK has eliminated moral rights protections for computer software,[863] and in 1985 even France, the most steadfast bastion of moral rights defense, enacted a law making software a work for hire, thereby stripping programmers of authorial rights.[864] There are good economic reasons for doing so. Software, including games, is often subject to frequent alteration, even after the work is nominally completed and issued for sale; bugs must be fixed, patches must be issued, ports to other systems may be needed, upgrades and downloadable content are grafted onto works down the line. An employee asserting moral rights could block the implementation of such fixes and upgrades.[865]

The role of the user – that is, the player – in video games further challenges the copyright model of creative authorship and distribution. Because the player has choice in the game's internal world, and thus exerts a degree of control over audiovisual and narrative elements of the game, the player may be considered a creative agent in some sense – perhaps as coauthor, or in a manner resembling the fashioning of derivative works.[866] That degree of control is, in some games, far greater than was possible in very early games (text adventures with a limited set of predetermined play options) or in other early interactive media (e.g., choose-your-own-end films or choose-your-own-adventure books), suggesting a difference in kind, rather than merely degree, with respect to player autonomy.[867] User creative capabilities become even more complex in networked multiplayer games, where player interactions enable the construction of novel creative works within the game itself. These new works can be melded essentially with the game's framework (say, a particular pathway chosen by mutual decision of a party of players in an open-world adventure game) or built more or less independent of, and extractable from, it (for instance, an exchange of messages between two people via their in-game avatars).[868] These

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[862] Newman, at p. 136, refers to Shigeru Miyamoto, producer of several Nintendo franchises (including Mario, Donkey Kong, Zelda, and Star Fox) as an "auteur"; perhaps game designers will soon assert themselves in this mold.
[863] Irini A. Stamatoudi, *Copyright and Multimedia Works: A Comparative Analysis*. Cambridge, 2002, p. 161.
[864] This law does not address the moral right of attribution, which may still apply to software. Baldwin, p. 224.
[865] Stamatoudi, p. 162.
[866] Lastowska, pp. 495, 508-509.
[867] Stamatoudi, pp. 137-139.
[868] Lastowska, p. 510. Some games are robust enough to allow the creation or re-creation of full intellectual works *within the game world itself*; Shakespeare, for instance, has been performed by denizens of the game Second Life in a virtual reproduction of the Globe Theatre. Iryna Kuksa and Mark Childs, *Making Sense of Space: The Design and Experience of Virtual Spaces as a Tool for Communication*. Elsevier, 2014, chapter 9. The possibilities for a Borgesian infinitude of derivative works arises palpably from such circumstances – consider all the copyright interests inherent in, say, a video screen capture of a Second Life re-creation of a scene from the film *Tomb Raider*. (I am not aware of any attempt to actually do such a thing in real – er, Second – Life.)

games exhibit the simultaneous qualities of fixity and fluidity that David Levy ascribed to digital media; their fixity makes them copyrightable, but their fluidity simultaneously complicates copyright claims.[869] While this might suggest that strong-copyright models are a poor fit for interactive media, insofar as they grant extensive individual or moral rights in a fundamentally collaborative work, gamers do not enjoy greater usage liberties under American law. As the writers of the code and the providers of the servers, game architects (or, more commonly, their employers) retain rights of intellectual control equal with those of literary, musical, and moving image creators.

The permissiveness of some rightsholders in allowing derivative works to be built out of, or onto, their games – known as *modding* – makes moral rights an even murkier concept in the digital game milieu.[870] Modding has been a part of computer game culture essentially since its inception, and sometimes results in functional improvements to the game. Bug fixes are the simplest example – video games almost inevitably require changes in software code to correct unforeseen errors, and this work is often done by non-rightsholders. Mods can also add elements that make gameplay easier or more enjoyable; for instance, the game *Colossal Cave Adventure* (1975) was modded by a later user who added a score tracker and player inventory screen.[871] *Doom* and *Quake*, both first-person shooter games released in the 1990s, allowed users to fashion derivative works by designing additional play levels, changing the visual display (character clothing, weapons species, the design of the sprites for enemies, etc.), or even creating entirely new games using the same gameplay engine.[872] By the 2000s, mods such as *Counter-Strike* and *Defense of the Ancients*, both alterations of Valve Corporation properties, had become big business; the two games were so popular and lucrative that Valve bought out their intellectual properties and hired their designers.[873] Mods can artificially extend the market life of games that would otherwise lose their fanbases.[874]

Fair use in the realm of video games has fared little better than it has with sound recordings. Clickwrap/shrinkwrap licenses, which lay out End User Licensing Agreements (EULAs) for software, or Terms of Service (TOS) agreements for streamed and online gaming services, can strip users of their fair use rights (or conversely, can deny access to the game unless

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[869] Levy 1994, p. 24.
[870] McDonough 2010, p. 42.
[871] Kari Kraus and Rachel Donahue, "Do You Want to Save Your Progress?": The Role of Professional and Player Communities in Preserving Virtual Worlds". *Digital Humanities Quarterly* 6 (2012), paragraph 32.
[872] McDonough 2010, p. 111.
[873] *Counter-Strike* was designed by Minh Le and Jess Cliffe. "Top 100 Game Creators", #14. *IGN*, 2000. Available at < http://www.ign.com/lists/top-100-game-creators/14 >. *Defense of the Ancients* was designed by a pseudonymous modder known as IceFrog. Adam Biessener, "Valve's New Game Announced, Detailed: Dota 2". *Game Informer*, October 13, 2010. Available at < http://www.gameinformer.com/b/features/archive/2010/10/13/dota-2-announced-details.aspx >.
[874] *The Elder Scrolls V: Skyrim* is an example. Paul Tassi, "Valve's Paid Skyrim Mods Are a Legal, Ethical and Creative Disaster". *Forbes*, April 24, 2015. Available at < https://www.forbes.com/sites/insertcoin/2015/04/24/valves-paid-skyrim-mods-are-a-legal-ethical-and-creative-disaster/ >.

users agree to preemptively waive fair use liberties).[875] The language of some EULA contracts even resembles the moral right of removal in some cases. Software developers can claim the right to terminate licenses and stipulate the terms and conditions of those licenses with few limits, even to the point of requiring that the end user destroy all copies of that software.[876] However, video game derivative users, unlike digital music samplers, have been somewhat more successful in preserving fair use rights, at least for adaptation, within the contract language of some game licenses.[877] Regardless of licensing details, enthusiasts have created a cornucopia of novel expressive genres out of the stuff of video games. The list only begins with mods. Machinima (dramatic works performed within the gameplay of a video game), speedruns (the competitive completion of a game in the shortest time possible), fan fiction, cosplay, and YouTube-hosted Let's Play gameplay demonstration videos (some of which reveal plot elements, easter eggs, cheats, and other game secrets) all presumptively infringe on video game copyrights (and, sometimes, trademarks as well). Preservation activities, too, presumptively infringe, though preservation institutions have done comparatively little work negotiating for their rights in video game licensing agreements.[878] Merges's non-enforcement concept is particularly apt in the video game realm; vibrant communities often exist because of policies essentially amounting to salutary neglect on the part of the rightsholders, and when those rightsholders step in, either to limit uses or regulate them, they tend to do so clumsily and heavy-handedly,[879] and in ways that can stifle creative and preservational uses.

Defense of intellectual property claims for video games have increasingly been carried out through preemptive technological protection measures rather than post-hoc legal action. Like the music industry, the gaming industry sought to implement digital rights management software that would combat venal copying of newly released product, but the video game industry's DRM efforts have been far more successful than was the music industry's Secure Digital Music Initiative. Simple rights management strategies that did not deplete the value of the physical item – e.g., entering a set of randomized words from the instruction manual – were used before the development of software keys, but these only present a preservation problem when the game's supporting physical housing or documentation is not saved. Through the first few years of the twenty-first century, DRM was a minimal interference both to the enjoyment of games and to their preservation. Valve's *Half-Life 2* (2004) marked a turning point in widespread consumer acceptance of DRM controls that effectively rendered the first sale doctrine moot for personal

[875] Vaidhyanathan, p. 178; Kari Kraus, "A Counter-Friction to the Machine: What Game Scholars, Librarians, and Archivists Can Learn from Machinima Makers About User Activism". *Journal of Visual Culture* 10 (2011), pp. 100-112, at pp. 101-102. Similar issues are afoot with other digital media transactions. Tsou and Vallier, p. 473.
[876] Ross Dannenberg, *The Legal Guide to Video Game Development*. 2nd edition. American Bar Association, 2016, p. 163. This is difficult to enforce legally, but even as a purely moral obligation (and one, at least aspirationally, with legal backing), it is inimical to preservation values.
[877] Kraus, p. 104; McDonough 2010, p. 115. Of course, rightsholders reserve the right to end such permissive licensing at at any time. Kraus, p. 105.
[878] McDonough 2010, pp. 115-118.
[879] Evan Lahti, "Valve: Modders 'Absolutely' Need to Be Paid". *PC Gamer*, February 10, 2017. Available at < http://www.pcgamer.com/valve-modders-absolutely-need-to-be-paid/ >.

computer (PC) games. The game required online activation through Valve's Steam gaming service, even for purchased physical copies. Despite a buggy rollout and gamer opposition, the game proved wildly successful, and the ease of pushing out software patches and extended content, as well as low price points and selection through Steam, drove consumer adoption of online-activated (or all-online) PC games.[880]

A variety of DRM strategies have been in recent use in the games marketplace. Some DRM implementations limit the number of computers on which the game can be installed.[881] Other games offer limited functionality in their offline modes, or require an active Internet connection while the game is played, even for single-player modes.[882] Online verification methods allow access to games only as long as the company keeps the authenticator systems active; some go dark after only a year or two.[883] As with other technological protection measures, the DMCA makes end-running around these restrictions illegal, regardless of fair use or preservation concerns – an unintended consequence of poorly designed law and technology working in concert with one another.[884] It is noteworthy, however, that all DMCA exemptions that were made for the purposes of accessing and preserving historical copyrighted works, to date, have been made for computer software and video games. Several such protections have been implemented since rulemaking began by the Librarian of Congress, though only one is currently active.[885]

C. Ephemerality

Video games are digital media, but they still subsist on material objects, and so in many ways, video games are representative of general problems with digital preservation that are not limited even to creative works. Anything stored on digital media is prone to damage under certain conditions, such as the presence of large magnets, high heat, or power overloads. Hardware storage in the digital world has been through many generations since the development of mainframe computers with non-volatile memory in the 1950s. Tape drives, data cartridges, and 8-inch, 5¼-inch, and 3½-inch floppy disks all may require significant expenditures of time, money, and expertise to extract data from them, and the older the storage medium, the less likely

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[880] Christopher Luke Moore, "Digital Games Distribution: The Presence of the Past and the Future of Obsolescence". *M/C Journal* 12 (2009); Chris Kohler, "Full Steam Ahead: Inside Valve's Grand Plan to Replace Game Consoles with PCs". *Wired*, November 4, 2013. Available at < https://www.wired.com/2013/11/valve-steam-machines/ >; Luke Plunkett, "Steam Is 10 Today. Remember When it Sucked?". *Kotaku*, September 12, 2013. Available at < http://kotaku.com/steam-is-10-today-remember-when-it-sucked-1297594444 >.

[881] Henry Lowood, ed. "Before It's Too Late: A Video Game Preservation White Paper". *American Journal of Play* 2 (2009), pp. 139-166, at p. 146.

[882] Newman, p. 104. Always-on DRM was used by the game developer Ubisoft for titles such as *Assassin's Creed 2* (2009), but after widespread consumer dissatisfaction, they modified the games' DRM to one-time online activation in 2012. Luke Karmali, "Ubisoft Officially Ditches Always-On DRM". *IGN*, September 5, 2012. Available at < http://www.ign.com/articles/2012/09/05/ubisoft-officially-ditches-always-on-pc-drm >.

[883] Lowood, p. 146; Newman, p. 104. The 2015 DMCA rulemaking, for the first time, permitted circumvention of DRM for games whose authentication servers are permanently offline. It expires in October 2018 unless renewed.

[884] Edward Tenner, *Why Things Bite Back*. Alfred A. Knopf, 1996, pp. 6-7.

[885] This is discussed in detail in VIIB.

it is that the files will be easily readable through modern platforms. Any digital magnetic media storage system is subject to a process known as *bit rot*, the gradual weakening of the magnetic orientation of the particles containing the information. As those orientations change, the content of the files change, thus serving as a native corruption process for digital objects. The speed of bit rot varies by medium; for instance, since 5¼-inch and 3½-inch disks were typically made with cheaper materials, they degrade quickly, in terms of both bit rot and physical decomposition of the disk's oxide coating.[886] Optical discs rot, as well; even for professional-quality digital game disc releases, pitting and discoloration degrades playback ability over time.[887]

Computer hard drives, now a common game storage medium, often fail suddenly, without warning; no perceptible process of degradation indicates that conservation work is necessary. Hard drive failure sometimes occurs because the ball bearings wear out in the drive; these can be replaced and there is technically no data loss as long as the magnetic components remain intact, but data recovery from such a drive is costly and requires significant technical expertise.[888] Cartridge-based games may be the most durable format, as they are housed in a protective shell and their inner parts are less volatile than other formats; nevertheless, corrosion of metal connectors and leakage of internal batteries is possible.[889] Battery death of memory chips in cartridge games does not normally make the games unplayable, but it can effectively limit the gaming experience of longer narrative games, which can require more than 100 hours of gameplay to complete.[890] In general, the archival estimates for the shelf lives of digital media are depressingly short; perhaps factory-stamped CDs will last 100 years or more (if the hardware to read them survives that long), but professional archivists do not consider hard disk drives reliable preservation media for longer than five years.[891]

Obsolescence's threats to video game survival are yet more pressing. Like any digital medium (and, indeed, like analog sound and video recording media), video games cannot be directly observed by the human eye from their information storage units – a crucial difference from celluloid film, printed books, manuscripts, sheet music, or cave paintings. Computer games require functional hardware with human-perceptible output for the software to run. As Johannes Goebel has quipped, "if digital technology does not have an output, you will never know if it works or not."[892] Preservation of early arcade games is plagued by problems with maintenance of circuitry and malfunction of cathode-ray display screens.[893] Evolving computer standards have

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[886] Lowood, p. 141; Bryan Bergeron, *Dark Ages II: When the Digital Data Die*. Prentice Hall, 2002, p. 41.
[887] Lowood, pp. 141-142.
[888] Bergeron, p. 63.
[889] Lowood, p. 142; Bergeron, pp. 66-67.
[890] James Newman, *Best Before: Videogames, Supersession and Obsolescence*. Routledge, 2012, p. 14.
[891] "Computer Hard Disks and Diskettes – FAQ". Canadian Conservation Institute. Available at < http://canada.pch.gc.ca/eng/1456340763236 >.
[892] Johannes Goebel, "Eternity and Megalomania". Talk given at Henry Art Gallery, Seattle, WA, October 29, 2016. Videorecording on file with author.
[893] Tom Woolley, James Newman, and Iain Simmons, "Preserving Games for Museum Collections and Public Display: The National Videogame Archive". In Janet Delve and David Anderson, ed. *Preserving Complex Digital Objects*. Facet Publishing, 2014, pp. 63-72, at pp. 68-69.

birthed a plethora of access and transfer issues for computer games; 8-inch, 5¼-inch, and 3½-inch disks must be read on working drives that will accept them, via connector cables that must be adapted to fit modern interface standards, using software that can access and process the files contained therein.[894] Even then, the games may not display properly through modern video standards, since they were created to run on video cards that are no longer manufactured or supported.[895] Furthermore, older games may be written in programming languages that are no longer in common usage, requiring expertise, or training, in dead languages in order to recover them.[896]

Obsolescence is exacerbated in the computing world by quick progression of hardware and software systems into, and out of, the marketplace. Many console games, for instance, are issued only on one platform, and the pace of platform turnover in the video game industry is frenetic; new systems with exponentially more processing power have been released consistently every few years since the 1970s. The platform history of Nintendo, a company that releases both hardware and software, exemplifies this trend. Nintendo's first console system, released (only in Japan) in 1977, was the Color TV Game. It was superseded by the Famicom in 1983 (known as the Nintendo Entertainment System when introduced to the United States in 1985), the Super NES in 1990 (1991 in the US), the Nintendo 64 in 1996, the GameCube in 2001, the Wii in 2006, the Wii U in 2012, and the Switch in 2017. Nintendo has released a new generation console system approximately every five years for the past four decades.[897] The company stopped offering any repair or part-replacement services for older consoles in 2007.[898] Less-successful competitor systems, such as the Fairchild Channel F, the Mattel Intellivision, or the TurboGrafx16, are unlikely to be any easier to find parts for in the future, though enthusiast communities still support an aftermarket for parts of enduringly popular legacy systems such as the Commodore 64.[899] Manufacturers, too, are rightsholders; they do not always hold copyright in the intellectual content, but they often hold rights in the software and hardware that makes access to the intellectual content possible, adding a layer of complexity to preservation attempts.

Nintendo, like many video game manufacturers, appears to design its platforms according to principles of *planned obsolescence* – a term originating from industrial design, referring to a

[894] Bergeron, pp. 13-15; Uwe M. Borghoff et al., *Long-Term Preservation of Digital Documents: Principles and Practices*. Springer, 2006, p. 4.
[895] Bergeron, pp. 15-16.
[896] Bergeron, p. 86.
[897] The total increases if one includes handheld systems – the Game Boy in 1989 and the DS in 2004.
[898] Andrew Cunningham, "The NES Turns 30: How It Began, Worked, and Saved an Industry". Ars Technica, July 15, 2013. Available at < https://arstechnica.com/gaming/2013/07/time-to-feel-old-inside-the-nes-on-its-30th-birthday/3/ >.
[899] A retrospective written by a dealer of legacy computer parts: Reid C. Swenson, "What Is a Commodore Computer? A Look at the Incredible History and Legacy of the Commodore Home Computers". 2016. Available at < http://www.oldsoftware.com/history.html >.

strategy of intentionally designing products such that they will have relatively short shelf lives.[900] It can occur through mechanical failure (known as *death-dating*),[901] technological advancement that increases the functional capacity of new products, changes in taste and fashion,[902] or by using advertising and appeals to psychology to influence market demand – or any combination of these. Planned obsolescence is sometimes fostered in environments with poor market competition, where products are deliberately manufactured from inferior materials so that customers will be forced back to stores to replace them quickly (since they usually cannot go purchase a more durable substitute product from a competitor).[903] There is a certain sense in which this idea is emblematic of larger concerns about the growth of a culture of disposability, one inherently inimical to tasks such as preservation and historical consciousness.[904] Design choices govern durability and reparability; for example, printed circuits, from the 1950s onward, were often made to be disposable rather than mendable or replaceable, because the transistor radios into which they were inserted were never envisioned (by producers or consumers) as long-term products.[905] By contrast, both *Voyager I* and *Voyager II* are still transmitting to NASA, maintenance-free, after more than forty years in space.[906]

Yet ascribing nefarious motives to the software and hardware cycles of the video game industry seems to mischaracterize the actors in the marketplace. It would be blatantly cost-prohibitive to build every computer as ruggedly as the Voyager probes, and even NASA did not intend for the Voyager power and instrumentation systems to last more than double their current operating life. Viewed at scales longer than decades, computers and consoles appear as fragile beasts; we don't design computers to last for centuries, in part, because we don't know how. We lack the historical experience or quality control testing to demonstrate that the intricate circuitry governing computers in the here-and-now could reliably be designed in such a way that its materials would not corrode or degrade under normal wear and tear for a hundred years or more.[907] No doubt, that should give the world pause about the wisdom of assuming that

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[900] Slade, p. 5. The term *structured obsolescence* is occasionally used to refer to the same concept. Lisa Parks, "Falling Apart: Electronics Salvaging and the Global Media Economy". In Charles R. Acland, ed. *Residual Media*. University of Minnesota Press, 2007, pp. 32-47, at p. 35.
[901] Slade, pp. 164-169.
[902] This is sometimes differentiated in the literature as *stylistic obsolescence*. It can be organic or manipulated; perhaps it is always at least a little of both. Jonathan Sterne, "Out With the Trash: On the Future of New Media". In Charles R. Acland, ed. *Residual Media*. University of Minnesota Press, 2007, pp. 16-31, at p. 20.
[903] Newman, chapter 2; Sterne, p. 24. Slade traces the origin of this strategy to Depression-era industry practices, where inferior raw materials cut production costs while increasing sales. Lewis Mumford and Vance Packard, among others, drew attention to planned obsolescence. Slade, p. 79.
[904] Slade, esp. at pp. 3-4, 31-32.
[905] Slade, pp. 105-106.
[906] "Eyes on Voyager". Jet Propulsion Laboratory. Available at < https://eyes.jpl.nasa.gov/eyes-on-voyager.html >.
[907] Sterne, at pp. 28-29, opines that durable, well-designed, and user-friendly computers are a reasonable request to make of manufacturers, given that we expect similar product quality from cars and appliances. He supposes that such devices do not get designed because built-in obsolescence is necessary for corporate survival; radio companies, he points out, went out of business in droves after they had saturated the market with durable, functional products in the 1920s. Perhaps Sterne is right, up to a point; my Game Boy still runs, more than twenty-five years on. Computers that last as long as cars should be feasible, especially since cars are increasingly becoming, more or less,

everything digitized has been saved for posterity, but it is not by itself justification to pillory the computer industry for insidiously reproducing the power hierarchies of global capitalism. Computing power grows at a fast enough rate that computers become functionally obsolete as utilitarian objects within a few years, so it does not make much business sense to build a durable, more expensive computer that will last several decades when it will no longer be a functional business or entertainment tool for most consumers in five to ten years.[908] Furthermore, technologies break down and require repair and maintenance in ways their designers often cannot predict in advance.[909] This is still an obsolescence of *technology*, even if it is compounded by advertising strategies and consumer whim (or, perhaps, consumer short-sightedness).

Of course, none of this excuses companies from having quality control processes over their raw materials, nor does it absolve consumers, consumer protection groups, and (especially) librarians and archivists from demanding durability of electronic goods.[910] But the business acumen that motivates planned obsolescence has adverse preservation side effects, and is compounded by the dropping of spare part stock and tech support for older products.[911] Hardware manufacturers are under no obligation to release technical specifications for the sake of historical preservation, once they have ceased manufacturing a product that has become obsolete.[912] Keeping up a team of support coders and complaint personnel for a small cachet of legacy users is expensive; Blizzard, the company behind the *Diablo* series, is considered an

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computers. But cars do not last for the life of their owner plus seventy years – at least, not without regular, meticulous, and expensive care and feeding.

[908] This is a cycle, and both hardware and software companies are complicit in it. It is vicious if one takes the view that the cycle is artifice naturalized through discourse so that what consumers 'buy' is, in fact, a carefully managed narrative of progress that selectively remembers past things to sell present things, serving to increase corporate profits while disguising social and environmental ills (a position Newman argues and Sterne alludes to). It is virtuous if one believes that better technology is rightfully couched as a narrative of progress and that increased computing power can lead to real improvements in user experience and perhaps even in solving social and economic problems, even as it may create new problems or exacerbate existing ones (a homily of technological optimism). I am agnostic as to this battle; both are probably oversimplified and overly a-prioristic (even granting that my summary is also a simplification). Rather than make a large-scale judgment as to the moral status of the commodity economy and/or 'better living through chemistry', as new media theorists and futurist gurus are wont to do, I intend to focus more narrowly on the fact that technological obsolescence, in particular, is intensified by this cycle, and that there are good normative reasons to want to change that fact, or to design around it.

[909] Daniela K. Rosner and Morgan G. Ames, "Designing for Repair? Infrastructures and Materialities of Breakdown". In *Proceedings of Computer-Supported Collaborative Work (CSCW) '14*. Association for Computing Machinery, 2014. However, some manufacturing strategies (such as Apple, which fuses batteries for iPhones and Macintosh laptops to the device housing) actively stymie repair and maintenance. Steve Jackson, "Rethinking Repair". In Tarleton Gillespie, Pablo J. Boczkowski, and Kirsten A. Foot, eds. *Media Technologies: Essays on Communication, Materiality, and Society*. MIT Press, 2014, pp. 221-240, at pp. 235-236.

[910] Newman, at pp. 12-13, makes much of the fact that the plastic housings of Apple and Nintendo hardware discolor over time. This does not appear to result in any functional loss, though embrittlement of the plastic might make it break easier. Ultimately, this visible sign of age is probably more patina than true preservation worry; whether and how much the interstices of the machines are built to last is much more at issue, and rigorous external testing of the shelf lives of many of these products has never been done.

[911] This can happen for some products within the span of one to two years. Bergeron, p. 83.

[912] Borghoff, at p. 19, suggested just such a legal mechanism.

outlier for continuing to support its games with bug patches for almost twenty years after initial release.[913] Copyright, by inhibiting competition and substitution in the marketplace, exacerbates the problem. No one else can legally provide access to the game, no one else can legally access or update the source code,[914] and no one else can even machine and sell patented parts for the first twenty years, a rare entry of patents into the problem of intellectual property and obsolescence.[915] As Kathleen Fitzpatrick notes of Apple, "[the] desire – and one generalized throughout the computer industry – to move users to newer systems by deprecating older ones (thus minimizing the number and range of systems for which they are required to provide support) suggests that we will need to look for sources other than the manufacturers in order to ensure access to older systems."[916]

Helen Tibbo has argued that the "fragility and evanescence of digital files and records requires archival and preservation decisions and actions be made close to, or at, the point of creation. Archival qualities, that is, the enduring value of some information, must be recognized early, if not at the time the information is produced; the need for immediate and continual preservation demands that digital creators and users be frontline appraisers and build preservation potential into the materials they produce, receive, and for which they are responsible."[917] Game manufacturers, however, make most decisions in ways that thwart future archiving, and the strengthening of copyright law in the past forty years reinforces this tendency – particularly the anti-circumvention clauses of the DMCA. By contrast, open-source games (such as the early role-playing game *NetHack*), by the very nature of their copyright status,[918] instantly become a trivial preservation problem; the practical issue of version tracking replaces raw survival of game code as the chief preservation concern.

D. Preservation

Video game preservation is accomplished in several ways. Games released on physical media can be preserved on their material substrates, along with any hardware needed to play them; this will only preserve the games for as long as the physical materials will operate. Games can be *ported* or *migrated* from one operating system to another by transferring and adapting the

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[913] Jason Schreier, *Blood, Sweat, and Pixels: The Triumphant, Turbulent Stories behind How Video Games Are Made*. Harper, 2017, p. 94.
[914] Since source code is proprietary, it is not usually distributed to the public by rightsholders. McDonough 2010, p. 23; Mark Guttenbrunner, Christoph Becker, and Andreas Ramber, "Keeping the Game Alive: Evaluating Strategies for the Preservation of Console Video Games". *International Journal of Digital Curation* 1 (2010), pp. 64-90, at p. 77; Alasdair Bachell and Matthew Barr, "Video Game Preservation in the UK: Independent Games Developers' Records Management Practices". *International Journal of Digital Curation* 9 (2014), pp. 139-170, at p. 143.
[915] McDonough 2010, p. 52.
[916] Fitzpatrick 2011, p. 123.
[917] Tibbo, p. 4. See also Margaret MacLean and Ben H. Davis, Ed., *Time and Bits: Managing Digital Continuity*. Getty Conservation Institute, 1998, p. 15.
[918] *NetHack*'s source code was made freely available on Usenet newsgroups in the 1980s, and played a role in popularizing open-source models of software distribution. David L. Craddock, *Dungeon H@cks: How NetHack, Angband, and Other Roguelikes Changed the Course of Video Games*. Press Start Press, 2015, pp. 103, 112.

game's source code, if the second operating system is capable of running the game.[919] If the new system is not capable of doing so, the software environment native to the game must also be reproduced by processes of *emulation* or *virtualization*.[920] Porting, migrating, emulating, or creating virtualization environments all require copying, and usually adaptation, of the digital files comprising the game. A Library of Congress report describes the problem succinctly: "The most basic preservation action for any digital object is to convert it into a media-neutral format. This is typically done by creating an image of the original media; that is making an exact, bit-for-bit replica of the disk that can then be mounted from the hard drive or burned to a fresh disk…. In other words, the simplest and most common preservation process violates reproduction *and* (usually) anti-circumvention provisions in U.S. intellectual property law."[921]

One complicating factor for preservation of interactive media is that video games are *inherently* digital cultural artifacts, and thus necessarily require *digital preservation*.[922] Sound and video can both be created digitally, and they can be preserved (even if they were not born-digital creations) through processes of digitization, which approximate the analog signals through a quantifying process – 'turning them into ones and zeros', as a popular metaphor has it. But they do not need to be. Analog sound and video can also be preserved via analog processes; film stock and vinyl records, for instance, both carry analog representations of intellectual content.[923] Video games, by contrast, are fundamentally built on digital electronics governed by electrical circuitry and computer code.[924] They are inescapably digital from the start, and any analog representation of a video game irreparably sheds large portions of that game's intellectual content.[925] For instance, a recording of the audiovisual output of a game would fail to save its source code, which provides insight into the game's structure and creative composition. Some game settings are so complex, capturing their full output audiovisually would amount to hundreds or thousands of hours of footage; others have gameworlds that are created through a procedural generation process as the gamer plays, in which case capturing the entire work audiovisually is impossible. An audiovisual recording also destroys the interactive nature of the game. User choice, and the system's response to that choice, is a fundamental constitutive element of a video game. No game can be said to be preserved if the ability to play through the

[919] McDonough 2010, pp. 78-83.
[920] McDonough 2010, pp. 61-67.
[921] McDonough 2010, p. 52. Emphasis original.
[922] Video games are illustrative of the types of works Margaret Hedstrom had in mind when she wrote, "Digital storage is not simply an alternative means for storing print formats. Many types of digital objects do not have print equivalents and cannot be preserved in non-digital formats." Hedstrom 1998, p. 193.
[923] There is some sense in which motion picture film can be said to be digital, in that it captures photographs frame-by-frame, discretely, rather than continuously. However, photographs are analog representations of the physical space in front of the camera; digitization processes quantize the shapes and colors of each individual frame.
[924] The exception to this is the earliest games made for machines whose input was punched paper tape, such as the PDP-1, which originally ran *Spacewar!*. McDonough 2010, p. 5. That paper is not acid-free and is, quite literally, full of holes, comprising its informational content; damage to these holes destroys the program.
[925] Borghoff, p. 40.

game is not also preserved.[926] Preserving a game, thus, means preserving its code, at minimum, and perhaps saving its physical instantiation as well – both the object that stores the code and the objects that read, display, and allow the user to interact with that code.[927]

Emulation and migration both involve changing the game code in ways that can affect the gaming experience – thus creating derivative works, rather than merely copying per se. As Video Game History Foundation founder Frank Cifaldi puts it, "by nature, a port is a derivative work."[928] From a preservation standpoint, emulators pose problems for authenticity – the emulated game may not accurately recreate the feel of the initial release in significant ways.[929] There are many reasons why code alterations may be needed to preserve and provide access to older video games. It can be difficult to replicate aspects of the original code that relied upon specific, often undocumented, hardware configurations and features.[930] Unusual or custom file formats can make rendering of game elements challenging. Metadata such as system requirements and file architecture information may be crucial to an emulation attempt.[931] Preserving such games may require reverse-engineering aspects of the software or hardware, or rewriting portions of the code so that it will still function on the newer systems to which it has been transferred. Unlike both audio and moving image works, legal carve-outs for video game preservation must permit both duplication and adaptation if they are to put preserving entities on secure ground.

Gaining access to historical video games is complex for two major reasons. First, the variety of methods of game distribution is bewilderingly large. Video games were made for early

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[926] This statement was challenged by the Preserving Virtual Worlds team, who suggested that, at least for some games, "the ability to play a particular game is not a necessary condition of preservation. Rather, preserving games is about understanding the significance of a particular place and time, the social interpretability of a game." Rhiannon Bettivia, "Where Does Significance Lie: Locating the Significant Properties of Video Games in Preserving Virtual Worlds Data". *International Journal of Digital Curation* 11 (2016), pp. 17-32, at p. 18. See also Levy 1998, p. 156; Newman, pp. 123, 154-158. Yet this seems to confuse preserving the (social) history of the game (a laudable additional task) with preserving the game itself. The experience of a game is at least in part built out of its gameplay. Even for games whose gameplay experience is eroded (say, by the loss of its userbase), preserving that gameplay will have important evidentiary qualities to future observers. Maybe preserving the history of some game is *more* important than preserving its gameplay (as Bettivia finds is the case for some stakeholders), but it would be disingenuous to claim that one has indeed preserved the game if one preserves the former but not the latter.

[927] Even saving a game's code is not a simple definitional matter; for source code to produce the game, it may also be necessary to preserve the object code (the code that translates the game from machine-readable binary code into human-readable source code) and the operating system in which the source code operates. McDonough 2010, p. 13.

[928] Interview with Frank Cifaldi. *Achievement Oriented* (podcast), episode 16, at 10:09. *The Ringer*. Available at < https://soundcloud.com/achievementoriented/ep-16-achievement-oriented-on-preserving-video-games >.

[929] Brian Matthews, Arif Sharon, and Esther Conway, "How Do I Know That I Have Preserved Software?". In Janet Delve and David Anderson, ed. *Preserving Complex Digital Objects*. Facet Publishing, 2014, pp.125-139, at p. 134.

[930] Drew Baker and David Anderson, "Laying a Trail of Breadcrumbs – Preparing the Path for Preservation". In Janet Delve and David Anderson, ed. *Preserving Complex Digital Objects*. Facet Publishing, 2014, pp. 91-106, at p. 94.

[931] Jerome McDonough, "A Tangled Web: Metadata and Problems in Game Preservation", and Janet Delve, Dan Pinchbeck, and Winfried Bergmeyer, "Preserving Games Environments via TOTEM, KEEP, and Bletchley Park". In Janet Delve and David Anderson, ed. *Preserving Complex Digital Objects*. Facet Publishing, 2014, pp.185-200 and 217-233.

mainframes and minicomputers, arcade cabinets, television console units, portable handheld systems, web browsers, and every type of personal computing device, from the Osborne 1 to today's smartphones and smartwatches. Their code has been fixed on hardwired memory boards, hard disk and solid-state drives, removable disks, cartridges, chips, and magnetic tape – or distributed through browsers. Intercompatibility between these systems, even for data storage systems that were widely employed (e.g., floppy discs and optical media), was rarely put into play; most hardware companies deliberately eschewed standardization for the sake of cultivating a body of users who would use their systems exclusively. Cartridge-based systems, for instance, were explicitly designed as a type of controlled ecosystem difficult to copy in comparison to PC floppy disks.[932]

Second, video game manufacturers have historically focused primarily on attracting players to new content, rather than to legacy properties. This is, in some sense, no different from any other content industry; fashions change, audiences evaporate, profits fall. Video game aesthetics, probably more than any other medium of expression, are driven by technological advances, which make game worlds more immersive, increase the range of options a player may make in gameplay, and allow for more intricate storytelling. In general, the more processing power a game has, the more complex its decision trees, the higher its visual resolution, and the smoother its functioning – all elements that make older games quickly feel antiquated in the eyes of many consumers.[933] As markets for games die, the incentive for rightsholders to preserve is likewise extinguished. Little information on industry preservation practices has come to light as yet; a handful of recent exploratory studies of developer practices indicate current preservation activities among game companies are minimal and ad-hoc.[934] Anecdotal tales of loss have emerged. Square Enix released the initial game in the *Kingdom Hearts* series on PlayStation 2 in 2002. By the time the company decided to remix and re-release the game in 2013, they had already lost the original game assets; all the game's audiovisual material, for instance, had to be recreated from scratch.[935]

The recording, film, and television industries successfully converted home audio and video into long-tail markets for older works, ensuring comparatively more access to historical content, while the video game industry failed to duplicate this state of affairs for many years.[936] One drawback of this focus on the new is the absence of backward compatibility between older

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[932] Kuehl, p. 323.
[933] Newman critiques this consumer-producer orientation as a species of *psychological* obsolescence, somewhat akin to Katherine Fitzpatrick's notion of (social) obsolescence discussed in Part III, but games, like every other form of culturally important media, have ardent defenders and collectors. Their history is not being forgotten, even if it were accurate to describe the games industry as one "whose forward movement is almost wholly contingent on the denigration of its own present and past", as Newman avers at p. 75. More pressing is the disconnect between collectors and archivists, on the one hand, and game rightsholders, on the other – a problem the market has been unable to solve and which copyright actively frustrates.
[934] Kraus and Donahue; Bachell and Barr.
[935] Luke Karmali, "Original Kingdom Hearts' Assets Lost". *IGN*, June 27, 2013. Available at < http://www.ign.com/articles/2013/06/27/original-kingdom-hearts-assets-lost >.
[936] Lord, pp. 408-409.

and newer systems, even those made by the same company.[937] Cartridges for console systems could not physically connect with other types of consoles; the first console to offer backward compatibility was the PlayStation 2, which could run PlayStation 1 titles.[938] PlayStation 4 consoles do not support PlayStation 3 games, even though both use optical disc technologies, and despite the fact that PlayStation 3 consoles would, for a time, run PlayStation 1 and 2 games.[939] Classic games are sometimes bundled and offered as package inclusions with new consoles, and gaming companies are increasingly turning to online webstores to redistribute older content, which requires repurchase and does not provide a work that is in any meaningful sense preservable (neither physically, nor digitally outside the personal account established by the user via the store and/or console). A relatively small clutch of still-popular titles are offered; one informal study found less than one-third of pre-2002 console and handheld systems were available via rightsholders' online webstores.[940] Furthermore, reissued games are often altered in ways that significantly affect gameplay and user experience, which vitiates their value as historical and archival objects even as it keeps them accessible.[941]

Nevertheless, for decades, secondary markets have existed for older video games and the relevant hardware needed to play them (e.g., consoles and controllers). Physical copies of games were traded up until the common implementation of digital rights management keys for PC releases (which rendered the physical disc useless after a unique product key was expended or an Internet activation code was verified).[942] The move to all-digital distribution essentially obviated the used game market for newer titles, though it opened up avenues for low-cost access to historical games on newer operating systems. Perhaps most encouraging in this realm is the success of Good Old Games, a DRM-free game distribution site initiated in 2008 – though, of course, it can only host what it can license.[943] Platforms like Steam and Nintendo's Virtual Console, which offer DRM-tethered games in an account one can take from computer to computer, solve some practical problems temporarily. They demonstrate a corporate commitment to access, and provide a stable platform for that access. Yet they are by no means long-term preservation vehicles. Virtual Console purchases cannot be transferred to other

[937] This is an enduring deficiency of digital technology; "the history of digital systems is one of rapid obsolescence and a lack of backward compatibility." Levy 1998, p. 152. Scholars writing on digital preservation have long called for the implementation of backward compatibility standards, but these have gone mostly unheeded in practice in many creative digital industries. Hedstrom, p. 198.
[938] James Conley et al., "Use of a Game Over: Emulation and the Video Game Industry, A White Paper". *Northwestern Journal of Technology and Intellectual Property* 2 (2004), pp. 261-290, at p. 264.
[939] Andrea Peterson, "PlayStation 4 Can't Play Old Games. But Backward Compatibility Was Just A Fad." *Washington Post*, November 15, 2003. See also Khanna, pp. 85-87.
[940] Zachary Knight, "Extended Copyrights in Games Means a Loss of Culture for Gamers". Random Tower Games, February 4, 2014. Available at < http://randomtower.com/2014/02/extended-copyrights-in-games-means-a-loss-of-culture-for-gamers/ >.
[941] Paul Gooding and Melissa Terras, "'Grand Theft Archive': A Quantitative Analysis of the State of Computer Game Preservation". *International Journal of Digital Curation* 3 (2008), pp. 19-41, at p. 23.
[942] McDonough 2010, p. 29; Ben Depoorter, "What Happened to Video Game Piracy?". *Communications of the ACM* 57 (2014), pp. 33-34.
[943] Erik Kain, "Good Old Games: GOG.com and the DRM-Free Revolution". *Forbes*, May 30, 2013. Available at < https://www.forbes.com/sites/erikkain/2013/05/30/good-old-games-gog-com-and-the-drm-free-revolution/ >.

consoles.[944] Platform libraries are unstable; games can be removed any time without notice from stores or from users' download libraries,[945] restricting access even to previously purchased content in a way that was impossible with physical items. Some digital distribution services only stream the games; no local copy is ever created, making the game's survival entirely a matter of whether the company's streaming platform remains active.[946] Without active rightsholder cooperation,[947] the only ways to preserve such a game are either to create an unauthorized duplication of the server architecture to make one's own version of the game, or to initiate a process of *reconstruction*, putting together existing saved elements of the game to attempt to re-create as much as possible of the experience of the game.[948] Both of these options would contravene derivative work provisions, unless a fair use defense could successfully be litigated.

Access to out-of-print games has been provided by and for gaming enthusiasts through (typically unauthorized) internet distribution of digital files of game code. In order for many of these games to function, however, the operating system in which the game formerly ran needs to be replicated. Acting without the blessing of game companies, independent programmers developed emulation software to allow most arcade and console games to be playable on personal computers.[949] Since computing power reliably outstrips itself in a matter of months or years,[950] the processing power needed to run older games is usually trivial on newer systems, and files of the original game's code, known as ROMs, could be transferred easily over the Internet from the 1990s onward.[951] The development of emulators themselves has been found by the Ninth Circuit to be a fair use of copyrighted code, as a type of disassembly, analogous to reverse

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[944] Newman, p. 108.

[945] They can do so for rights-related issues or to restrict the speech of game designers. Erik Kalin, "Steam Removes Game 'Order of War: Challenge' From User Libraries". *Forbes*, December 30, 2013. Available at < https://www.forbes.com/sites/erikkain/2013/12/30/steam-removes-game-order-of-war-challenge-from-user-libraries/ >; Andrew Tarantola, "Apple Yanks Games with Confederate Flags from the App Store". *Engadget*, June 25, 2015. Available at < https://www.engadget.com/2015/06/25/apple-yanks-games-with-confederate-flags-from-the-app-store/ >.

[946] Lowood, pp. 145-146. See also Reese 2012, p. 311.

[947] This would involve "the game development company either distributing the server-side technology to their player base or…providing the source code to the player community." McDonough 2010, p. 85.

[948] McDonough 2010, pp. 83-85. An example of such a reconstruction, for an essentially text-based work, is William Gibson's *Agrippa*. Kraus and Donahue, paragraphs 39-44.

[949] Emulators were also developed for game systems that were in current use; these were the primary target of video game industry anti-piracy efforts from 1999, after an emulator for the Nintendo 64 was released while the console was still on the market. Conley, pp. 268-269.

[950] An informal observation made by Intel founder Gordon Moore, known colloquially as Moore's Law, holds that computing power doubles at approximately biennial intervals, a projection that held steady for nearly forty years. James Niccolai, "Intel Pushes 10nm Chip-Making Process to 2017, Slowing Moore's Law". *InfoWorld*, July 16, 2015. Available at < http://www.infoworld.com/article/2949153/hardware/intel-pushes-10nm-chipmaking-process-to-2017-slowing-moores-law.html >.

[951] Jeffrey S. Libby, "The Best Games in Life Are Free?: Videogame Emulation in a Copyrighted World". *Suffolk University Law Review* 36 (2003), pp. 843-861, at p. 847. For an overview of how emulation works in practice, see McDonough 2010, pp. 61-64. McDonough 2010, at pp. 64-67, also discusses *virtualization*, a closely related technique; emulation and virtualization differ mainly in the degree to which the hardware and system architecture differ between the preservation target and the host computing environment.

engineering of patents, that enables otherwise-impossible access to works.[952] Replicating and distributing the game code itself for use in emulators, however, is presumptively infringement, though unauthorized distribution of older games attracted comparatively less public and legal attention than sharing of music and movies did during the peer-to-peer service era.[953] Fair use does not sway in favor of ROMs, at least in terms of public access or preservation by non-library or archival institutions, since the works are creative rather than factual, the entire work is used, and the potential market value is impacted.[954] Even for institutional or scholarly use, the fair use rationale can be too great a legal risk to take; as one academic has put it, "[i]t is not acceptable for professional researchers to be downloading illegal media."[955] Archival fair use or Section 108 defenses may fare better, though anti-circumvention provisions of the DMCA could still apply. Section 108 also applies only to reproduction, whereas archival institutions will need to carry out adaptation, as well, in order to retain the games' interactive nature and ensure access to their intellectual content.[956]

The proliferation of emulator systems, built painstakingly and in defiance of copyright law by game fans, illustrates another avenue by which audiences, acting outside of institutional help, have done preservation work.[957] For nearly as long as video games have existed, as Kari Kraus and Rachel Donahue have noted, there were "players taking responsibility for collecting, managing, curating, and creating long-term access to computer games."[958] Video game collectors and ROM code generators, like jazz and blues discographers and silent film enthusiasts before them, built their own archival communities. They restored old hardware, imaged disks to create transferable copies of game files, built lists of missing titles and hunted them down, and even

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[952] Lord, p. 415; Libby, pp. 849-851. The relevant case law is *Sega Enterprises v. Accolade*, 977 F.2d 1510 (9th Cir. 1992), and *Sony Computer Entertainment v. Connectix*, 203 F.3d 596 (9th Cir. 2000). The DMCA also permits reverse engineering and DRM circumvention for the sake of interoperability. 17 U.S.C. § 1201(f). Since the *Accolade* and *Connectix* cases did not involve emulators made by game access communities, it has been asked whether emulator creators or distributors could be held liable for contributory copyright infringement by enabling use of unauthorized ROMs. This has not seen litigation. Patent law may also be available to games companies to stop emulator distribution for games less than twenty years old. McDonough 2010, pp. 55-56.

[953] Lord, pp. 407-408. Enforcement was not completely lax, however; Nintendo and Sony sent cease-and-desist letters to emulator providers and publicly inveighed against unauthorized distribution in the 1990s and 2000s. Vito Pilieci, "Emulators Have Video Game Manufacturers Fuming Mad". *National Post*, April 17, 2000; Chris Taylor, "Video Games Get Trashed". *Time*, March 15, 1999, pp. 72-73; "Pirates at the Dock". *SF Weekly*, September 15, 1999; Chris Remo, "Capcom, Nintendo Spearheading DS Piracy Lawsuit". *Gamasutra*, October 14, 2009. Available at < http://www.gamasutra.com/view/news/116594/Capcom_Nintendo_Spearheading_DS_Piracy_Lawsuit.php >.

[954] Brian Flood, "Emulating the Classic Video Games: Protecting Copyright on the Internet". *Syracuse Law and Technology Journal*, 2000, pp. 2-20, at p. 15.

[955] Dan Pinchbeck of the University of Portsmouth, quoted in Joanna Barwick, James Dearnley, and Adrienne Muir, "Playing Games With Cultural Heritage: A Comparative Case Study Analysis of the Current Status of Digital Game Preservation". *Games and Culture* 6 (2011), pp. 373-390, at p. 376.

[956] McDonough 2010, p. 117.

[957] An example of the difficulties inherent in obtaining original game data may be found in Omar Cornut, "*Wonder Boy: The Dragon's Trap*: Reverse Engineering an *[sic]* 1989 Original: The Quest for Accuracy". *Gamasutra*, September 12, 2016. Available at < http://www.gamasutra.com/blogs/OmarCornut/20160912/281112/Wonder_Boy_The_Dragons_Trap_Reverse_engineering_an_1989_original_the_quest_for_accuracy.php >

[958] Kraus and Donahue, paragraph 1.

created documentation and indexing systems to manage the works and metadata associated with them.[959] This process continues today with online and massively-multiplayer games, whose historical value was championed first by its own users before attracting the attention of academics.[960] Independent, local, and regional games development scenes, as well, are often preserved by private collectors and amateur hobbyists.[961] In essence, much of the industry's history is being preserved by its audience, carrying out tasks that have become steadily more and more difficult and been made progressively more unlawful over time. Even openly criminal activity – the smuggling out of trade secrets by employees interested in documenting corporate history – has become a recurrent practice among game developers interested in preservation of the work they do, in the absence of company interest.[962] There is thus pervasive nonenforcement occurring in video game preservation – in essence, it was the engine driving the vast majority of video game preservation.

The value of video games as cultural artifacts worthy of preservation was opaque even to those within preservation communities until very recently. Penelope Houston, author of a book on film preservation, noted in 1994 that guidelines for the (British) National Film and Television Archive proposed the institution should request 'published electronic works', presumably including video games, and perhaps the platforms on which to play them. Houston mused, "Does the NFTVA really *want* video games? The position, it would seem, is not so much that it wants them as that it would like to put down a marker, securing its right to such material."[963] American and Japanese institutions, unsurprisingly, have been at the forefront of video game collection development and preservation, indicating that they *do*, in fact, really want video games.[964] Stanford University began an informal video game preservation project as early as 1998, and the Library of Congress began collecting video games in earnest in 2007.[965] The Library of Congress has since become a leader in accepting game collection donations and collaborating with rightsholders.[966] Other institutional archives include the Learning Games Initiative[967] and the archives at SUNY-Stonybrook and the University of Texas-Austin. Independent museum

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[959] Newman gives the example of HVSC, an amateur archive for soundtracks of Commodore 64 games that created its own cataloguing system and developed a quality assurance system for its files. He later discusses projects like MAME, an independent attempt to build a comprehensive emulator archive of coin-operated arcade games, and Unseen 64, ColecoVision.dk, and Games That Weren't, all attempts to document unreleased or cancelled games. Newman, pp. 26-31. See also Kraus and Donahue, paragraphs 16-19.
[960] Derek L. Murphy, "Documenting Pocket Universes: New Approaches to Preserving Online Games". *Preservation, Digital Technology & Culture* 44 (2015), pp. 179-185.
[961] Melanie Swalwell, "Towards the Preservation of Local Computer Game Software". *Convergence* 15 (2009), pp. 263-279, at p. 264.
[962] Charlie Hall, "The Future of Games History is Workplace Theft". *Polygon*, March 6, 2015. Available at < https://www.polygon.com/2015/3/6/8158649/games-history-workplace-theft-internet-archive >.
[963] Houston, p. 158. Emphasis original.
[964] Barwick, Dearnley, and Muir, pp. 376-377.
[965] Heather Chaplin, "Is That Just Some Game? No, It's a Cultural Artifact". *New York Times*, March 12, 2007.
[966] David Gibson, "Alone in the Dark: The Question of Abandonware and Video Games". Presentation given at Orphans X conference, Culpeper, VA, 2016. [PowerPoint slides on file with author]
[967] Jason Thompson, Ken S. McAllister, and Judd Ethan Ruggill, "Onward Through the Fog: Game Collection and the Play of Obsolescence". *M/C Journal* 12 (2009).

collections have been established in the US, UK, and Germany,[968] though several institutions dedicated to video game history have struggled to maintain budgetary solvency.[969] The video game industry itself lags behind in these preservation efforts; as with the film industry, video game companies have shown relatively little interest in the historical or aesthetic value of older games.[970]

Video games, too, have orphan works problems; there are a multitude of historical games whose intellectual ownership is not clear. These are often referred to as *abandonware*, a term coined in the 1990s for computer software that no longer received support from its publisher, or whose publisher had gone out of business or is unknown. For games whose rightsholders can be conclusively identified and located (both often formidable tasks),[971] the original source code has often been lost, leaving the only route to preservation "retrofit[ting] retail code taken from a boxed copy of the game."[972] Estimating availability and loss is more difficult for video games than for film, because large-scale documentation projects are still in relative infancy. A 2008 study using questionable heuristics found that 60% of a random sample of Atari 2600 games were not available in archives and 34% were not available for sale at any price on the resale website Ebay; however, one hundred percent of the games were available in an emulated version.[973] No doubt, more have become available in archives, and fewer at a reasonable market price, in the intervening decade.

Video games, perhaps even more than audio or moving image works, highlight the challenges of meaningful preservation in context, because contextualizing them demands the preservation of ever more entities – many of which are themselves copyrightable. What must one preserve to make a game meaningful and interpretable to future players? There is the work itself, insofar as a definitive thing, an expression or set of expressions that constitutes the work, can be identified. Games ported to different systems – for instance, a game released simultaneously for PC, Xbox, and PlayStation (as is common in the 2010s) – will inevitably have slight differences in graphics, gameplay, and presence of bugs (fortuitous or game-breaking). International releases are often adjusted to suit markets and cultures in ways that are almost always of intellectual interest. Error fixes and patches also make it difficult to pin down an authoritative version of a game, though this is ultimately no less true of other works, such as books released with

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[968] Barwick, Dearnley, and Muir, pp. 379-380; Woolley, Newman, and Simmons, pp. 63-64.
[969] Keith Stuart, "How a Group of Industry Veterans Rescued the National Videogame Archive". *The Guardian*, September 16, 2016. Available at < https://www.theguardian.com/technology/2016/sep/16/national-videogame-arcade-nottingham-gaming-institution >; Cinnamon Nippard, "Computer Game Museum Opens in Berlin". *Deutsche Welle*, January 21, 2011. Available at < http://www.dw.com/en/computer-game-museum-opens-in-berlin/a-14779137 >.
[970] Newman, p. 35.
[971] Swalwell, p. 269.
[972] Tom Bennet, "How GOG.com Save and Restore Classic Videogames". *Rock Paper Shotgun*, September 16, 2015. Available at < https://www.rockpapershotgun.com/2015/09/16/how-gog-com-save-and-restore-classic-videogames/ >.
[973] Gooding and Terras. The study relied on Wikipedia and Ebay circa 2007 for documentation and availability, respectively, and as such, its findings should be considered, at best, as indicative proxies for future research.

corrigenda and in several editions. Likewise for musical works – what status has the sheet music, the recording, the manuscript, the *urtext* edition? We may need (or at least desire) *all* of them to understand a musical work fully – if even thinking of it as a discrete work, or set of works, is useful.[974] James Newman has explored the difficulty of pinning down a definitive version of *Donkey Kong*, as it was released in slightly different configurations for dozens of different systems.[975] This is infinitely harder for, say, a massively-multiplayer social game like *Farmville*, which at its height of popularity was pushing out updates almost daily, and in the process changing its gameplay.[976] The recent move in the technology industry toward conceiving of software as a service, rather than a product, results in a proliferation of updates and downloadable content that become part of the gaming experience (and often become inaccessible once one stops paying for the service). Whatever preserving such games means, it surely means more than preserving just *one* of their configurations.

The work being preserved, since it is copyrightable, is creative, and is often for that reason considered art, or artistic in some important sense. As a representation of human creativity, we ascribe it some value, and that value is in many cases the primary reason anyone even takes the time and effort to consider preserving it. By preserving an artistic expression, we also preserve a history of artistic expression (or some piece of that history). Preservation of works, collectively, preserves a history of culture, of civilization, but that record is incomplete if the creative works are handed down in isolation. Returning to music again briefly, recordings are an immensely rich documentary source for understanding the past, but the recording alone preserves only a fraction of the musical culture and social life that surrounded it. "What does it sound like?" yields to "why was it made", "how was it made?", "who listened to it?", and "why did they (or didn't they) like it?", among others. To capture that history more fully, one needs more than just a digitized file of sound. One needs ancillary materials – the studio outtakes that didn't make it to the record, tracks excised from the final edit, lyric sheets, live performances – which calls for a more holistic sense of asset management in preservation.[977] To understand the work in context, though, one needs even more than this. One needs other contemporaneous musical works, great and mediocre, to understand the work in comparison to its contemporaries and competitors. One needs written musical commentary of the day, programs of broadcast, advertisements for the work or artist, to understand how its audience heard it (or was directed to hear it). One needs to capture the studio and compositional and educational processes that fed into the work's creation, the recording horns or magnetic reel recorders, the manuscript sources and lead sheets, the fake books and beginner's literature. One needs the physical materials that

[974] The musicologist Lydia Goehr famously challenged the notion that musicians routinely thought of their output as discrete works (deserving of individual attention as artistic pieces, and therefore legal protection as authored creative objects) before about 1800. Lydia Goehr, *The Imaginary Museum of Musical Works*. Revised edition. Oxford, 2007. See also Michael Talbot, ed. *The Musical Work: Reality or Invention?*. Liverpool University Press, 2000.
[975] Newman, pp. 3-8.
[976] Interview with Frank Cifaldi, at 16:00 – 17:38, esp. at 16:56.
[977] A similar argument is made regarding film in Howard Besser, "Digital Preservation of Moving Image Material?". *The Moving Image* 1:2 (2001), pp. 39-55, at pp. 43-44.

accompanied the work when it was listened to, the physical embodiment in wax or plastic, the liner notes pulled with one's fingers from the unit's housing, the mechanical apparatus that played it, the speakers or headphones through which it was heard, even the acoustics of listening spaces. This makes robust preservation an enormous task! It is destined for failure, and the preservationist's hope is not to avoid failure, but to fail only in ways that prove relatively unimportant to both present and future understanding. Insofar as we fail, we leave behind an impoverished record, and must hope that these impoverishments do not systematically lie to the future about how the past experienced itself. Copyright ought to stand in the way of this process as little as possible.

Preserving video games in context manifests parallel difficulties. Patterns of game use, and the experience of gaming, are central to meaningful game preservation at least as much as, if not more than for, other species of culture. Thus, preservation of games will inevitably extend to game hardware, as well as to materials ancillary to the consoles, disks, and cartridges themselves.[978] Controllers, for instance, affect the experience of gaming in unique ways, and an emulated game played on a keyboard or touchscreen may poorly re-create the feel or the challenge of gameplay;[979] *Rock Band* or *Duck Hunt* seem to require their unique controllers to be worth playing in the future.[980] Early console generations were designed to be played on low-definition cathode-ray tube televisions, making the visual experience quite different on newer display screens.[981] Controllers and televisions, as obsolescent objects, may need to be maintained or duplicated, despite any patent or trade-secret interference, in order to keep such games playable.

The task of recreating a game's experience is particularly acute for multiplayer video games. Video games are interactive by nature, but many of them are also social by nature; they are built as multiplayer experiences, and often played using a network connection so that they can be played with remote agents or simultaneously with physically collocated acquaintances. Social games, including the categories of multi-user dungeons (MUDs) and massively-multiplayer online role-playing games (MMORPGs), are full of people doing things, by themselves and with, or to, each other. The social elements of these games are essential parts of them, constitutive of what the game itself is. To preserve the game code, to emulate its audiovisual elements, preserves only a small part of what makes (or made) these games what they are (or were). *FarmVille* or *Second Life* make no sense to play alone. The user history within the game thus becomes an integral part of the work itself, for many such games.[982] As they lose their userbases and become digital ghost towns, MMORPGs go through another, metaphorical, process of obsolescence – ultimately, one neither copyright nor technology can

[978] Barwick, Dearnley, and Muir, p. 381; McDonough 2014, p. 189.
[979] Newman, p. 7.
[980] Bachell and Barr, p. 144.
[981] Baker and Anderson, p. 102; Nick Montfort and Ian Bogost, *Racing the Beam*. MIT Press, 2009, p. 87.
[982] McDonough 2010, p. 38; Murphy, pp. 182-183.

ameliorate.[983] Here, too, users have stepped in at times to attempt to reconstruct the worlds, even going so far as to set up their own private servers to host the game's reverse-engineered code.[984] The development of augmented reality games, such as *Ingress* and *Pokemon Go*, complicate the issue yet further, since they layer the game world onto the physical world, requiring users to move and interact with each other in geographical space. Preserving the digital map over which the games were laid (the property of Google, in both of the examples given) may only be part of what is necessary to re-create these games in the far future. One would also need to understand the changes in geographical space over time (if not, quixotically, a description of the entire world itself) and how these changes were reflected, or not, by the map database as it was integrated into the game.[985]

If the user culture inside a game matters to its preservation, so does the user culture *outside* the game; documentation of forums, wikis, and fan creations (playthrough videos, commentaries, fan art, cosplay) provide essential evidence about how the game was played.[986] Even if one saves the code itself of an online social game, it's possible that "the documentation that will be a pre-requisite for future historical studies of virtual worlds won't be there. It never was. The most important qualitative documentation was somewhere else, on a blog or a wiki, in a player-created database…, in technical documentation, or Flickr screenshots, or a YouTube video."[987] Supporting metadata and auxiliary documentation may be needed to make preservation worthwhile, and all of this material has potential intellectual property implications of its own. Furthermore, such documentation begins to help explain not just how, but *why* the games were played. Social games have *histories*, histories that are not captured by source code, and perhaps not even preserved by client servers, if, for instance, users delete their own data. [988] Certainly, that history is not extractible for games whose developers do not release it, an event unlikely to occur in most cases. In-game information is proprietary and may present an economic risk to companies that make it public. Users may have intellectual property rights over in-game objects or creations[989] (a sub-class of orphan works virtually impossible to track due to the anonymity of Internet social architecture), and, in some cases, game information may even implicate privacy concerns of users (or, at least, the terms of contract with those users).

The problems of video game preservation are often equally applicable to other copyrighted digital arts, such as interactive fiction. Many of these works are already generally

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[983] Patricia Hernandez, "YouTuber's Journey into Abandoned MMO is Creepypasta Material". *Kotaku*, March 28, 2016. Available at < https://kotaku.com/youtubers-journey-into-abandoned-mmo-is-creepypasta-mat-1767500088 >.
[984] Matt Sayer, "The Death and Rebirth of *The Matrix Online*". *Vice Waypoint*, December 7, 2016. Available at < https://waypoint.vice.com/en_us/article/53g5dk/the-death-and-rebirth-of-the-matrix-online >.
[985] Jin Ha Lee, Stephen Keating, and Travis Windleharth, "Challenges in Preserving Augmented Reality Games: A Case Study of *Ingress* and *Pokemon Go*". *Proceedings of the 14th International Conference on Digital Preservation*. Kyoto, September 25-29, 2017.
[986] McDonough 2010, p. 40. This connects to larger projects of documenting digital or virtual communities that have come to concern scholars in history, communications, and information science. Tibbo, p. 14.
[987] McDonough 2010, p. 48.
[988] McDonough 2010, pp. 39-40.
[989] McDonough 2010, pp. 90-91; Lastowska, p. 511.

classified as video games (e.g., early adventure games such as *Zork* and the visual novel genre of games), but other works in the realm of hypertext fiction (like the 1987 interactive novel *Afternoon* by Michael Joyce or Join Bois's multimedia short story *17776*)[990] or interactive comics (such as Andrew Hussie's *MS Paint Adventures* creations)[991] require migration or emulation to maintain their structure and playability and preserve their intellectual experiences. Joyce's *Afternoon*, for instance, was written using a program called StorySpace, which is written specifically for Macintosh machines and which requires periodic, expensive software upgrades to run on modern operating systems (and only on Apple products).[992] Similar issues arise in attempts to preserve, or even document, Internet-based art. Some of these artistic endeavors are built using intellectual property structures its creators do not have rights control over, some are built on platforms that do not prove to be stable over time, and some are reactive in real time to the actions of its audience or to third-party activity.[993] Attempts to think of such emergent art forms as similar in kind – for instance, by collecting them under the umbrella term *complex digital objects*[994] – obscures the peculiar ways in which they may present novel preservation challenges. These challenges only grow deeper with time; the intricate dependencies of modern digital creative works require the interconnection of vast stores of objects that must be related to one another properly across multiple platforms and layers of software and underlying system code. Every one of those objects, platforms, and pieces of software and code are presumably copyrightable, and every one of them could potentially become obsolete over short timespans. As the complexities of format proliferate, so, too, will conceptual difficulties, as lawmakers and theorists attempt to box the new art forms into copyright's assumptions about what a creative work is, what its boundaries are, how it is made, and how it is distributed. We are surely not done creating new genres of, and formats for, digital culture, and the complexity of their characteristics will surely be mirrored in the complexity of copyright control over them.

VII. Building Preservation into Copyright Law

The copyright histories and material properties of sound recordings, moving images, and video games together strongly indicate a need for practical changes in the implementation of American copyright law (and, by extension, international copyright controls). Copyright law in the United States has become a blunt, one-size-fits-all instrument, used to cover the weightiest and the most insignificant creative acts alike. Its grant became progressively more expansive, its

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[990] Ian Crouch, "The Experimental Fiction that Imagines Football-Obsessed Americans in the Extremely Distant Future". *The New Yorker*, July 12, 2017. Available at https://www.newyorker.com/culture/rabbit-holes/the-experimental-fiction-that-imagines-football-obsessed-americans-in-the-extremely-distant-future .
[991] Lilian Min, "A Story that Could Only Be Told Online". *The Atlantic*, February 24, 2015. Available at < https://www.theatlantic.com/technology/archive/2015/02/a-story-that-could-only-be-told-online/385895/ >.
[992] Fitzpatrick 2011, pp. 6, 98-100, 122.
[993] Simon Biggs, "Make or Break? Concerning the Value of Redundancy as a Creative Strategy", and Michael Takeo Magruder, "Between Code and Space: The Challenges of Preserving Complex Digital Creativity in Contemporary Arts Practice". In Janet Delve and David Anderson, ed. *Preserving Complex Digital Objects*. Facet Publishing, 2014, pp. 21-30 and pp. 31-46.
[994] E.g., Janet Delve and David Anderson, eds. *Preserving Complex Digital Objects*. Facet Publishing, 2014.

exceptions manifold, arcane, confusing, and in many cases, ineffective for their intended purposes. Prior to 1976, shorter terms and renewal and registration requirements served as natural winnowing processes, making copyright more flexible in its coverage than the automatic grant upon fixation does today. The pre-1976 system was not without problems, and making the system less flexible, in certain ways, might have produced good effects. The changes since 1976 drastically decreased copyright's flexibility, and today, copyright has never been more rigid in its application to creative works. Not all of the effects of this increased rigidity have been beneficial, and one negative repercussion in particular is, I argue, a cardinal problem for twenty-first century culture and beyond: the increased legal difficulties surrounding the preservation of degrading and obsolete media.

Nevertheless, current law is not void of preservation thinking, though as Michael J. Madison has noted, "A legal framework for durable forms of knowledge is partly baked into the structure of [intellectual property] law, but negatively, and to a limited degree."[995] The limited term of copyright, the fixation requirement, the idea/expression dichotomy, the merger doctrine, the concept of *scenes a faire*, deposit requirements for bringing suit, fair use, and first sale all have at least some role in allowing for the preservation either of cultural works themselves or of the knowledge and ideas those works contain.[996] While intellectual property theory generally has little impact on actual legal and regulatory practice, my thesis suggests some possible further avenues of redress in terms of policy changes. In closing this study, I will explore of aspects of current copyright law that comport with the theory revisions I have articulated, and analyze policy proposals that could be implemented to reflect a legislative or jurisprudential commitment to preservation.

Since the main thrust of my argument is in favor of a philosophical and theoretical reorientation, policy alone does not and cannot solve the theoretical problems I identify. Furthermore, practice must be verified by practice. It is not possible to state with confidence, a priori, that some policy will definitively fix a given pressing social issue; in order to judge its effectiveness, that policy's real-world impact must be evaluated against the values we seek to promote. Lastly, I have hoped to make a broad-based case that takes seriously all of the major defenses of intellectual property and argues for the incorporation of preservation into each of them. As such, I will refrain from making any definitive recommendations about what legal action or cocktail of actions would solve the neglect of preservation. Preservation-minded policy will be grafted onto the contours of whatever rights grant flows from a society's philosophical commitments to the protection of intellectual creations, and so the crafting of a policy that is satisfactory in practice at upholding the value of preservation could be accomplished in any number of different ways. These could include, for instance, reducing the total duration of the

[995] Madison, p. 1958.

[996] Madison, pp. 1972-1976. Note that the human effort required to make use of these legal mechanisms varies drastically from mechanism to mechanism; the idea-expression dichotomy, for instance, allows for the preservation of knowledge in a work, but only after someone has spent the time to rewrite or reframe the idea – a costly and lengthy process impractical on very large scales, in addition to being severely impoverished as a preservation tool.

copyright grant; loosening copyright scope restrictions that hamper preservation activities; reducing copyright scope gradually over the length of copyright; limiting copyright scope for particular types of physical media; limiting copyright scope for particular types of creative works; requiring rightsholders to preserve; implementing incentives that encourage rightsholders to preserve; and implementing copyright liberties that permit or encourage preservation by non-rightsholders. The choices implemented by any copyright system will vary, based (one hopes) on the principles, or compromise between rival principles, decided upon by the body politic governed by that system. Nonetheless, some combination of these approaches, or another approach that serves similar functions, must be implemented in practice for that system to be a morally justifiable schema for implementing intellectual rights.

As a conceptual matter, it would be possible to assuage the pressing problems of media decay without changes to current law, but this would require voluntary action from rightsholders on a massive scale that seems astronomically unlikely. Movement of works into the public domain, granting of blanket waivers of rights for preservation activities, and removal of technological protections such as DRM would all aid preservation's cause, but there is little indication that these behaviors will be more common in the near future. At times, appeals to responsibility have been successful in the past in convincing rightsholders to undertake preservation activities themselves or to collaborate with preservation institutions, which at least does some work for major or commercially viable intellectual creations.[997] Negotiations with preservation stakeholders might prove fruitful; perhaps this would result in more preservation-friendly terms of contract for intellectual work licenses. The growth of copyleft licensing schemas such as Creative Commons makes it easier to build preservation into works from the start, for creators who are conscious of its importance – in Merges's conception, it "make[s] it easy for owners to waive their rights", rather than seeking to "curtail or eliminate those rights".[998] The Creative Commons, however, is generally prospective, not retrospective; it is primarily applied to new works as they are created, and so does little for the great bulk of already-created works on fragile media. Private contract and voluntary licensing are laudable, when they work – but they are especially poor tools for handling materials that would incur high transaction costs (e.g., for older commercial media owned by large content-industry rightsholders, who are unlikely to find negotiation economically viable) or for orphan works (for which no negotiation or voluntary licensing program is possible). Lastly, it should be remembered that purely private ordering, as a solution to current woes, would operate within the structure of an already heavily statist framework. Industries looked to the state to protect their rights, and from the 1970s onward, received that protection, in spades, and by default – "more than 100 years of legal protection backed by 'strict liability' and federal criminal law" upon creation.[999] Citizens pay to enforce these rules through the exercise of state power; is it not

[997] Vallier 2013.
[998] Merges, p. 228. See also Boyle 2008, pp. 182-184.
[999] Boyle 2008, p. 184.

reasonable that they should ask for assurance, through legal mechanisms, that the more than 100 years of protection will yield them more than 100 years of extant content?

The orphan works issue, in many ways, reflects more general preservation problems, and so suggestions for dealing with orphan works serve as a useful proxy for potential preservation adjustments to copyright law. Five policy tactics have been proposed for ameliorating the orphan works problem: reliance on fair use, limiting damages on good-faith users of presumptively orphaned works, increasing exceptions and limitations such as Section 108, creating a licensing agency to hold funds in escrow for rights holders who emerge to claim orphan works, and larger-scale collective licensing implementation.[1000] To these may be added broader changes such as duration reduction and the restoration of registration and deposit formalities. I will focus the following discussion on three potential approaches to melding copyright and preservation in practice: reductions in copyright length, narrowing of copyright scope (via the provisions of Sections 107 and 108, resurrection of formalities, and the exemptions enabled by the DMCA), and the possibility of creating compulsory licensing schemes for preservational uses of copyrighted works.

A. Duration Reduction

The public domain – in the sense of the body works outside of copyright control, as formed by the sunset of rights due to copyright expiration – does the most work, by far, in ensuring that preservation activities can occur.[1001] As I have argued, the current term of federal copyright (for sound recordings, certainly, but more generally for all works) far outstrips what is desirable, or even defensible, under general theories of intellectual property. To this end, repeal or curtailment of the Copyright Term Extension Act would be in order, and rollbacks beyond this may well be justifiable. How short should the term be? In the pluralistic realm of copyright, where utilitarian, labor-based, and personality-based approaches will battle for argumentative supremacy, a midlevel compromise is perhaps all that can be hoped for. This suggests a pragmatically optimal copyright would probably last for at least the life of the author (or for a fixed term approximating the human lifespan), since a term significantly shorter than life would be unacceptable to personality theorists and to some Lockeans. Since media lifespans are now routinely shorter than human lifespans, broad preservation-oriented provisions, of some stripe, should therefore be implemented alongside the rights grant during the term of copyright.

More nuanced proposals varying the length of copyright might offer the promise of a brokered compromise between the irreconcilable ethical systems. The idea of a ‘rule of the longer term’ – a system affording protection of either X years or life of author plus Y years, whichever is longer – would assure a system where works do not pass into the public domain just a few years after an untimely death, while still allowing copyright to inhere for an artist’s full

[1000] Hansen et al., p. 23.
[1001] “The ease with which the dual objectives of preservation and access can currently be pursued is largely a function of whether a work is copyrighted or in the public domain.” Zimmerman, p. 998.

lifespan. England adopted such a system in 1814 – a rule of twenty-eight years or the life of the author, whichever was longer; in 1842, it was extended to 42 years or the life of the author plus seven years, whichever is longer.[1002] A similar system was proposed as an amendment to the 1976 Copyright Act, but it was defeated shortly before passage of the bill.[1003] Landes and Posner have suggested a five-year copyright that is renewable indefinitely, a proposal that would move many works into the public domain quickly while allowing lucrative works to be held longer for maximal value recovery.[1004] The proposal is intriguing, though if left in place for long enough, it might have the effect of keeping the works most desirable for re-use and redistribution in copyright for hundreds of years. If it were ever seriously pursued, it should be given an ultimate upper bound.

Since federal coverage does not extend to pre-1972 sound recordings, a move to reduce the length of federal copyright would make an important step toward preservation and accessibility of recordings, in particular, for the far future, but it would do little for present-day problems with older audio. A solution that has been proposed for the specific issue of pre-1972 recordings is to bring them under the umbrella of federal copyright.[1005] Federalizing legislation would have a number of concrete benefits. A unitary system of sound recording copyright, rather than the byzantine collage of coverage now in existence, would help clarify what rights sound recording copyright holders actually enjoy and may exercise, which remains murky under the state protection system.[1006] For prospective re-users, bringing pre-1972 recordings under federal protection would allow them to benefit from the provisions of Sections 107 and 108, securing fair use as a legal defense[1007] and making available the provisions applying to reproduction for libraries and archives (which, even if insufficient based on best practices and nascent technological solutions, are perhaps better than nothing). Gaining the protections of Sections 107 and 108, however, may seem a Pyrrhic victory if the public domain of sound recordings remains virtually empty for another half-century.

Furthermore, this cure for the ill may be worse than the poison itself. In statements to the Copyright Office, rightsholder lobby groups such as the RIAA noted that federalizing legislation

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[1002] Dubin, p. 812. This was extended to life-plus-50 in 1911, as the United Kingdom sought to bring itself in line with Berne. Desai 2011, pp. 227-228.
[1003] Cummings 2013, p. 149.
[1004] Landes and Posner 2003.
[1005] As this document neared completion, Congress was debating the Music Modernization Act of 2018, which, among other actions, would extend digital performance rights to pre-1972 sound recordings. Robert Levine, "Senate Introduces Bipartisan CLASSICS Act Covering Pre-1972 Recordings". *Billboard*, February 7, 2018; Paula Parisi, "Senate Introduces Music Modernization Act". *Variety*, May 10, 2018. Available at < https://variety.com/2018/biz/news/senate-introduces-music-modernization-act-1202806411/ >. An alternative bill introduced in May 2018 would fully federalize pre-1972s. Robert Levine, "New Alternative Bill in Senate Challenges Music Modernization Act". *Billboard*, May 24, 2018.
[1006] Register of Copyrights 2011, pp. 82-90, esp. at p. 88.
[1007] The U.S. Copyright Office has remarked, "it is likely that state courts presented with the issue would find that fair use is a defense to common law copyright infringement", but it found only one case in which this actually occurred, *EMI Records Ltd. v. Premise Media Corp.*, 2008 N.Y. Misc LEXIS 7485, at **14-15 (Sup Ct. Aug. 8, 2008). Register of Copyrights 2011, p. 92.

might upset contracts and settled expectations in business transactions.[1008] A legislative proposal would have to be carefully couched so as not to effect ownership changes of copyrights due to discrepancies between state and federal handling of, e.g., chains of ownership and termination of transfer.[1009] A Constitutional 'takings' challenge could be mounted against such a law, arguing that moving pre-1972 recording copyrights into the public domain before 2067 would violate the Fifth Amendment protection against deprivation of private property without just compensation.[1010] It is not clear that legislation shortening the term of any copyright, even those for sound recordings from the nineteenth century, would survive such a challenge.[1011] Transition periods, during which copyright holders may make works available, or demonstrate responsible preservation practices, in exchange for extended protection beyond the length of the transition, may work to satisfy due process and just-compensation concerns.[1012]

Takings problems could be an issue for any attempt to reduce copyright length for existing creative works. A reduction, to be constitutional, may need to be paired with taxpayer-funded payouts to holders of still-lucrative works, in order to offset likely lost future revenues. This solution would probably be odious to every stripe of the American political spectrum in the current environment. Prospective, rather than retroactive, diminution of copyright may be the only viable practical option. Thus, the degradation and obsolescence of twentieth-century media will almost surely be a significant copyright issue into the far future, since even if action were taken tomorrow, many decades of important works would be covered by today's laws, which will protect some copyrights well into the 22nd century. To dampen the impact of prospective reductions, proposed legislative action could use a 'ratcheting' strategy, reducing the length of copyright slightly year by year. A work created in the year 2019 could receive coverage for life plus 69 years, a work created in 2020 for life plus 68, and so on, until an agreed-upon lower threshold is reached.

As a practical matter, though, the term of copyright is unlikely to be shortened any time soon. Virtually every country in the world has dramatically increased copyright duration over the course of the twentieth century; the trend is not letting up, as the European Union's recent sound recording proposals, the CTEA, and the copyright harmonization arms race all demonstrate. The Berne Convention mandates long, life-plus terms worldwide, and Western governments,

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[1008] Register of Copyrights 2011, pp. 106-107.
[1009] Register of Copyrights 2011, pp. 107-108; Elizabeth Townsend Gard and Erin Anapol, "Federalizing the Pre-1972 Sound Recordings: An Analysis of the Current Debate". *Tulane Journal of Technology and Intellectual Property* 15 (2012), pp. 123-163, at p. 147.
[1010] Eva E. Subotnik and June M. Besek, "Constitutional Obstacles? Reconsidering Copyright Protection for Pre-1972 Sound Recordings". *Columbia Journal of Law and the Arts* 37 (2014), pp. 327-378, at p. 347.
[1011] The issue is analyzed in some depth in Subotnik and Besek, at pp. 347-366. But see Bell 2014, at pp. 96-97, arguing that precedent indicates patent and copyright 'takings' are not subject to just compensation.
[1012] An example is given at Gard and Anapol, p. 151. This sort of 'use-it-or-lose-it' structure has an analogue in trademark abandonment, since only active trademarks are protected; as a general principle it would follow logically from Lockean waste concerns to have a similar 'copyright abandonment' principle, which was present *de facto* when renewal registration was required. However, applying abandonment law to copyright has its own conceptual problems, discussed below.

especially the United States, have aggressively pushed other countries to strengthen copyright and increase enforcement against infringements on American rightsholders. Attempting to convince the United States (let alone the rest of the world) to reduce copyright duration in such a political climate seems thoroughly unrealistic.[1013] If William Hill were taking bets on American copyright duration, the odds would no doubt be much longer on a successful reduction than on the prospect of further extensions.

That said, the public domain may benefit from well-organized and funded defenders in the event of a struggle to reduce copyright strength. The *Eldred* decision came at the veritable crest of a wave of interest in opposing copyright duration and scope extensions such as the CTEA and the DMCA. Preservation institutions and reissuers of historical artistic works may eventually be able to present themselves as serious economic stakeholders who demand presence at the table in policy negotiations; Eldred, after all, sued because his business expectations had been upset by the new extension. As Michael W. Carroll has noted, "extension of copyright to new subject matter does not merely fill a void. Instead, it displaces a preexisting set of formal or informal means of relating to that subject matter. The establishment and extension of copyright law comes with a social cost."[1014] This cost was made increasingly visible by digital media access advocates in the early twenty-first century, and social and political organizations opposing unrestrained copyright growth were successful in defeating two copyright scope expansions, the Stop Online Piracy Act and the Protect Intellectual Property Act, in 2012.[1015] As such, at the least, it is unlikely that a duplicate Sonny Bono act adding another twenty years to copyright would sail through Congress the way the CTEA did (with a unanimous vote in the Senate and a voice vote in the House).[1016]

B. Scope Reduction

Changes in copyright scope could be pursued so that desirable uses of creative works, including preservation, can be legitimized in the face of irreducibly long copyright terms. The fair use provision of Section 107, the library and archival exemptions of Section 108, deprecated formalities such as deposit and notice requirements, and the exemptions provided in Section 1201 of the DMCA are all possible settings for introducing, restoring, or expanding preservation practice within copyright law.

i. Fair Use

While fair use, in general, is unreliable as a secure defense against copying and redistribution activities of the sort preservationists often do, a few recent case law reviews have

[1013] This sentiment is echoed by Jonathan Band in Nancy Weiss et al., "Section 108 Issues Other Than Mass Digitization". *Columbia Journal of Law and the Arts* 36 (2013), pp. 547-566, at p. 550.
[1014] Carroll, p. 956.
[1015] Herman, pp. 211-218.
[1016] S. 505, Sonny Bono Copyright Term Extension Act legislative history. Available at < https://www.congress.gov/bill/105th-congress/senate-bill/505/actions >.

argued that somewhat more consistency in judicial interpretation is arising.[1017] A heuristic analysis of preservation activities against the four factors of fair use suggests that the physical preservation of individual works, in and of itself, might be held fair, but the fairness of access activities downstream of preservation is far less clear. The purpose and character factor of fair use may weigh in favor of pure preservation copying, but this has not been universally held in case law.[1018] Preservation rather obviously serves to enable many of the virtuous activities enumerated in the fair use statute, including criticism, comment, scholarship, and research. The usage may also be fundamentally transformative, insofar as it can be defended as a project safeguarding historical, academic, or educational uses of the works over and above any commercial interest. Yet fair use is likely to be less reliable for the activity of distributing in order to ensure that there are be multiple copies of a work in disparate locations. Furthermore, preservation activities can often be commercial in nature – for-profit companies do preservation work, and there is a market for reissue of fragile historical media, including orphan works. The nature of the work used, of course, will depend from suit to suit; since preservation as a technique is agnostic to the nature of the work, one wonders whether this factor would play any significant role in judicial outcomes. The amount and substantiality factor weighs against preservation, since, of necessity, the entire work must be used. As with the first factor, preservation per se does not significantly impinge upon the potential market value of a work, but reissue and redistribution efforts that might flow from preservation activities often do (sometimes positively for the rightsholder, sometimes negatively).[1019]

At least some heritage institutions have become more comfortable relying on fair use defenses regarding preservation and public access usages of out-of-print and orphan works.[1020] Commercial actors granting access to preserved works in novel ways (such as reissue record labels) may not have as strong a fair use case, though the recent decisions involving the Author's Guild and the Google Books project suggest that fair use is still a possibility if the use is sufficiently transformative.[1021] The access component of preservation activities is no less crucial to the success of preservation activities and institutions than the physical preservation component, and fair use should consider this. It is hard for heritage institutions to justify the creation of 'dark archives' – preserved species of culture that are held inaccessible either due to copyright restrictions or terms of contract. Preservation costs money, and reissuance can be a means of recouping investment on, e.g., fragile orphan works.[1022] Diane Leenheer Zimmerman puts it well by noting, "creation of durable and reasonably complete archives probably cannot

[1017] Samuelson 2015; Matthew Sag, "Predicting Fair Use". *Ohio State Law Journal* 73 (2012), pp. 47-91.
[1018] *Authors Guild v. HathiTrust* notes diverging precedents on the issue. *Sony v. Universal* and the House report on the Copyright Act of 1976 suggest noncommercial archival copying is a fair use. However, in *American Geophysical Union v. Texaco*, a corporate library was held to infringe for making copies for internal use of its employees, with the decision stating, "the predominant archival purpose of the copying tips the first factor against the copier." *American Geophysical Union v. Texaco*, 60 F.3d 913 (2nd Cir. 1995), at p. 924.
[1019] Samuelson 2015, p. 854.
[1020] Hansen et al., p. 30.
[1021] *Authors Guild v. HathiTrust*, 755 F.3d 87 (2nd Cir. 2014); *Authors Guild v. Google*, No. 13-4829 (2nd Cir. 2015).
[1022] Zimmerman, p. 1033.

occur unless their creators couple their preservation with some form of public accessibility"[1023] – both for economic reasons and in order to fulfill their institutional commitments.

Fair use may be changed in two ways: judicial precedent and legislative action. Judicial articulations could clarify vague aspects of fair use doctrine, expand the preservation scope of the existing four factors, or even establish new factors, since the factors as codified in the Copyright Act of 1976 were intentionally couched as non-exclusive. For instance, the ephemerality and technological obsolescence of a work's medium could be taken into account as a fifth component of fair use determination, in a manner similar to the (highly restricted) obsolete-media provision of Section 108(h), discussed below. A landmark decision affirming preservation activities as fair use would do much to quell legal fears among preservation actors, but such jurisprudence is hard to manufacture, and, no doubt, no heritage institution wants to be the one losing a test case on the matter. Articulation by statute, by contrast, could provide secure legal footing for many preservation activities. Simply adding the word *preservation* to the fair use roll call of preferred usages would be a watershed action. Joseph P. Liu, for instance, has suggested that time should be a factor in fair use considerations, and that older works should have broader fair use allowances.[1024] At first blush, a time-based fair use proposal might raise the hackles of moral rights theorists; why would the author's rights degrade over the lifespan of the work? Yet preservation activities often serve as a means to *safeguard* an author's reputation and rights claims, rather than sully them. An author whose works no longer exist can no longer exert any control over them at all. Preserving them, in many cases, could have the effect of allowing the author *greater* moral rights claims in the long run. For some works, a time-based fair use window could presumably open very quickly for particularly ephemeral media; much copyrightable Internet media would seemingly qualify in a matter of years or even months, given the churn of Web content.[1025]

ii. Section 108

Expansion of the exceptions built into Section 108 of the Copyright Act could be pursued, though the Section 108 exceptions do nothing for the specific case of pre-1972 sound recordings at current, since these exceptions are not mirrored in any state law. The provisions of Section 108 merit detailed scrutiny. Section 108 is a product of the 1976 Copyright Act,[1026] and

[1023] Zimmerman, p. 1037.
[1024] Joseph P. Liu, "Copyright and Time: A Proposal". *Michigan Law Review* 101 (2002), pp. 409-481. Justin Hughes also suggested that the fourth factor of fair use (effect on market value) should be less heavily weighted for works closer to the end of their copyright term, as current and potential future markets for the works are likely smaller. Justin Hughes, "Fair Use Across Time". *UCLA Law Review* 50 (2003), pp. 775-800.
[1025] Hilderbrand, pp. 230-231. The Internet Archive's Wayback Machine is an example in practice of Web archiving that would benefit from such a fair use expansion.
[1026] A number of emendations to Section 108 were made by the DMCA, loosening some restrictions. E.g., 108(b)'s exemption was expanded from one to three copies to conform to microfilming best-practice standards, digital preservation copies were allowed (instead of the previous wording of "facsimiles", which implied paper-only), and 108(c) was amended to add the word "obsolete". Laura Gasaway, "Archiving and Preservation in U.S. Copyright

was included at the request of library and university advocates, in order to allow them to continue preservation of their own holdings via copying, and to ensure interlibrary loan copying remained legal (at least under some circumstances). It is explicitly a set of exceptions for public or research libraries and archives only; other profit or non-profit preservation agencies (including museums), or individuals interested in preservation, may not make use of them.[1027] In a highly complex and intricate set of regulations, it allows for:[1028]

108(a) – one copy or phonorecord to be made or distributed by the institution as long as use of the copy is noncommercial.

108(b) – up to three copies or phonorecords of *unpublished* works to be made for preservation and security, or for deposit in another library or archive, as long as the work is already in the library's collection and any digital copies are not made available outside the library premises.

108(c) – up to three copies or phonorecords of *published* works made to replace a copy that is damaged, deteriorating, lost or stolen, or if the current storage format has gone obsolete, as long as the library has determined that a replacement copy cannot be obtained at a fair price and any digital copies are not made available outside the library premises.

108(d) – a user request (interlibrary loan) of a periodical, or a small section of a copy or phonorecord of any other type of work, may be fulfilled with one copy, as long as the copy becomes the property of the user (i.e., is not kept by the requesting library) and the library receives no notice that that user intends to do anything with it other than use it for private study or research.

108(e) – a user request (interlibrary loan) of an entire work or substantial part of it may be fulfilled with one copy, as long as the library has determined that a copy cannot be obtained at a fair price, the copy becomes the property of the user (i.e., is not kept by the requesting library) and the library receives no notice that that user intends to do anything with it other than use it for private study or research.[1029]

108(f) – copy machines in libraries do not trigger liability for the library, so long as copyright notices are posted on them; patrons are liable if they use them in excess of their fair use rights. The provisions in this section do not trump contractual obligations of libraries.

Law". In Estelle Derclaye, ed. *Copyright and Cultural Heritage*. Edward Elgar, 2010, pp. 131-155, at p. 137. I will analyze the law in its current form.

[1027] 17 U.S.C. § 108(a)(2). See Laura N. Gasaway, "America's Cultural Record: A Thing of the Past?". *Houston Law Review* 40 (2003), pp. 643-671, at p. 651.

[1028] 17 U.S.C. § 108.

[1029] This provision is burdensome to libraries in practice, and they make little use of it. Gasaway 2007, p. 1336.

108(g) – prevents libraries from 'gaming the system' of Section 108 to create comprehensive or systematic archives outside of commercial distribution channels.

108(h) – allows for libraries to copy, distribute, or publicly perform or display a copy or phonorecord of a work which is in the last 20 years of its copyright term for purposes of preservation, scholarship, or research, as long as the work is not currently being commercially exploited, is not available at a fair price, and no notice has been served by rightsholders that either of the previous two conditions holds.

108(i) – Musical works, pictorial, graphic, or sculptural works, films, and audiovisual works other than news broadcasts are only eligible for sections b, c, and h of Section 108; however, reproduction and distribution of pictorial and graphic works which are included as illustrations or diagrams inside other works are also allowed under sections d and e.

Section 108 of the Copyright Act is one exception to the general rule of preservational neglect that I have argued is endemic to United States copyright law and philosophy.[1030] It is a (rare) example of Congress building preservation thinking into intellectual property infrastructure[1031] (and was implemented specifically at the behest of libraries who recognized that much of what they do in terms of preservation and access work was about to be made illegal by the Copyright Act of 1976). The Copyright Act of 1976 also established the American Television and Radio Archives, a national repository for news broadcasts. Section 108(i) exempts news broadcasts from the restrictions on sections (d) and (e), because of the strong public service interest in access to historical news footage. This provision, along with the National Film Preservation Act of 1988 and the Film Preservation Act of 1992,[1032] made the Library of Congress one of the premier film and video preservation institutions in the world.

Section 108(h) provides a foothold for ameliorating the orphan works problem; works in their last twenty years of coverage can be copied and distributed without permission if they are out of print.[1033] This provision was added alongside the Copyright Term Extension Act of 1998, again seemingly in a bargain with libraries to offset the rights increases inherent in duration extension.[1034] Rightsholders may assert their rights against a 108(h) use of their works by filing notice with the Copyright Office that they are still exploiting the work; the provision had never

[1030] The United Kingdom, by way of comparison, also has an archival exception in Section 42 of the Copyright, Designs and Patents Act 1988, which is more restrictive; it allows libraries and archives to make a replacement copy of a work needing preservation or replacement, or to replace a permanent (non-lending) copy in another library or archive that has been lost or damaged, so long as it is not practical to purchase a replacement copy. Sound recordings and audiovisual works are excluded. Paul Torremans, "Archiving Exceptions: Where Are We and Where Do We Need to Go?". In Estelle Derclaye, ed. *Copyright and Cultural Heritage*. Edward Elgar, 2010, pp. 111-128, esp. at pp. 111-112.
[1031] Laura N. Gasaway, "Amending the Copyright Act for Libraries and Society: The Section 108 Study Group". *Albany Law Review* 70 (2007), pp. 1331-1356, at p. 1331.
[1032] Pub. L. 100-446, 102 Stat. 1782; Pub. L. 102-307, § 214, 106 Stat. 267.
[1033] Gasaway 2003, p. 657.
[1034] Menell, p. 1037; Gasaway 2010, p. 139.

been used as of 2006,[1035] but it is unclear whether this is due to lack of rightsholder interest or if the provision in general is largely unknown. 108(h) includes a requirement that prospective works must not be under commercial exploitation, and more general orphan works legislation may need provisions that "exclude works owned by companies that have a structured, systematic preservation program that ensures their works are not lost".[1036] Some conflict could ensue if a library makes a work available under 108(h) and a rightsholder later decides to publish the work while it is still within the copyright term.[1037] It is also unclear which copyright term to apply to dual-copyright audiovisual media. If a sound recording or film is in its last 20 years of copyright, it may not be eligible for Section 108(h) if its underlying work has a longer active term.[1038]

Libraries are still potentially subject to legal action if they make any mistakes about the number of copies they make (and as noted above, best-practice digital preservation requires the making of more than three copies of works),[1039] if a work is still being commercially exploited in some way, or if copies are available at a reasonable price.[1040] Good-faith efforts to avoid breaching copyright law may not be a sufficient defense against an infringement action.[1041] As the statute is written, the library or archive has no way of adding to its collection works it does not (or did not prior to theft/damage) already have until a minimum of fifty years after the death of the author (or 75/100 years for anonymous works and works for hire). By this time, many works may have already become scarce or degraded completely.[1042] Library reproduction is also inhibited by digital rights management controls; in order to copy works protected by digital rights management, libraries would need to circumvent (hack) that protection. Ordinarily, this action is illegal under the provisions of the DMCA, though the rulemaking process of Section 1201 offers a means by which libraries and archives can request exemptions. Circumvention also requires libraries to breach the terms of contract with which born-digital goods are often laden. If the (negotiated or generic) licensing agreement for digital works demands that libraries (or generic end-users) are limited to a certain number of views/listens, or are prohibited by contract from making any further copies, the provisions of Section 108 (or for that matter, Section 107) may be of no help.[1043]

Section 108 does not apply to large-scale digitization initiatives of the type recently attempted by e.g. Google and HathiTrust; however, their actions were found to fall under fair use

[1035] Register of Copyrights 2006, p. 46. Gasaway 2010, at p. 139, notes that few libraries have even made use of Section 108(h).
[1036] Gasaway 2007, p. 1346.
[1037] Gasaway 2007, p. 1349.
[1038] Association of Research Libraries, p. 141.
[1039] Three copies is the minimum storage recommendation for best-practice preservation, and any transfer of audio to a new file format to keep it playable requires creating a new copy. Even for everyday access purposes, new copies will need to be generated from a master copy for patron viewing and listening sessions. Gasaway 2007, p. 1341.
[1040] Zimmerman, pp. 1016-1017.
[1041] However, library damages are supposed to be limited in cases where the use was believed in good faith by the institution to be fair. 17 U.S.C. § 504(c)(2); Patterson and Lindberg, pp. 212-213.
[1042] Zimmerman, p. 1017.
[1043] Gasaway 2007, p. 1343.

according to the decision in *Authors Guild v. HathiTrust* (2014).[1044] These organizations have resources and advantages of scale that many libraries and archives consortia do not.[1045] The breadth and systematic nature of their preservation activities attempts, and perhaps approaches, near-comprehensiveness; by contrast, library and archival preservation efforts are, of necessity, piecemeal, since 108(g) prevents them from being systematic as a matter of law. Current regulations thus hamper comprehensive digital archive creation in two ways: they prevent anyone other than libraries and archives from using the provisions of Section 108 at all, and they prevent libraries and archives from actually using those provisions to build comprehensive digital archives. Relaxing the statue to allow libraries to build archives that are more complete would be a valuable improvement.

Another possibility would be to increase the ambit of Section 108 to institutions other than libraries and archives – almost certainly, museums should be included, and perhaps even preservation efforts of for-profit companies. Of course, there is no guarantee that, should (for instance) Google choose to abandon the Books project, any future access would be granted, or even that the current archive would be salvaged.[1046] By contrast, JSTOR, the digital scholarly journal archive, has guaranteed its subscription libraries that it will supply them copies of its holdings in the event it should dissolve.[1047] This suggests rethinking what should be asked, practically or legally, of persons or institutions seeking to get into the preservation and/or orphan works game – what standards would be expected and what conditions would be necessary for them to qualify as a body that may make use of legal devices for preservation in an expanded Section 108.[1048] These may include standards for ensuring preserved copies are not destroyed and guarantees of public access (perhaps *libre*, but not *gratis*).[1049] Regardless, as Zimmerman rightly asserts, "[n]o one, whether a public library or an entity developed for the sole purpose of digital archiving…should be required to negotiate a license to copy a copyrighted work for purposes of preservation."[1050]

Preservation activities would also be fostered by adding the category 'fragile' to section 108(c).[1051] This would allow preservation work to start before actual loss or deterioration begins. Rather than activating based on market obsolescence of the technology used to capture the work, 108(c) could then depend on the inherent instability of that work's tangible instantiation. A study group devoted to revising Section 108's provisions recommended adding the word "fragile" after "obsolete" in Section 108(c), but this was never legislated.[1052] Peter Menell has proposed

[1044] 755 F.3d 87 (2nd Cir. 2014).
[1045] Zimmerman, pp. 1027-1030.
[1046] James Somers, "Torching the Modern-Day Library of Alexandria". *The Atlantic*, April 20, 2017. Available at < https://www.theatlantic.com/technology/archive/2017/04/the-tragedy-of-google-books/523320/ >.
[1047] Zimmerman, p. 1031.
[1048] Zimmerman, pp. 1030-1033.
[1049] Zimmerman, pp. 1030-1033.
[1050] Zimmerman, p. 1034.
[1051] Gasaway 2007, p. 1347.
[1052] Gasaway 2010, 146.

creating a safe harbor right for archival institutions, shielding them from liability in circumstances of good-faith copying for preservation and for indexing and making accessible small portions of works via search engine (though the need for this last suggestion may be moot as a result of the *HathiTrust* decision).[1053] Alternatively, expanding Section 108(h) to include more classes of orphan works could aid library and archival preservation activities. The European Union member states have recently adopted orphan works licensing schemes that allow libraries, universities, archives, museums, and public broadcast institutions to copy, digitize, and provide access to orphan works in their collections.[1054] While these initiatives tend to be very limited in scope, they are paradoxically coming to fruition in some countries where moral-rights-based intellectual property regimes are endemic. Other countries, such as Canada and Japan, have implemented state orphan works licensing schemes, under which nonexclusive licenses are available to applicants who wish to make use of a demonstrably orphaned work.[1055] Conversely, in the United States, even the most basic legislation to make orphan works promulgation less risky has foundered. The most recent attempt, a 2008 bill that would have limited damages for purveyors of orphan works who made good-faith efforts to search for rightsholders, was passed by the Senate, but never saw the light of day in the House of Representatives.[1056]

Using the concept of *abandonment* to apply to orphaned or out-of-print creative works may strike some as intuitively attractive, as it seems to capture the spirit of the problem well; orphaned video games, after all, are often referred to as abandonware. By analogy with real property, such works, on this intuition, have been left in some public space by their erstwhile owners, who have subsequently forgotten about those works, or perhaps chosen to relinquish their claims to them.[1057] As a legal concept, however, abandonment offers little to prospective orphan works users, at least at current. Abandonment, in American law, "refers to deliberate acts taken by the copyright owner to disclaim its interest in a protected work", and has two elements: (1) an intent to surrender all rights in the work; [and] (2) an overt act evidencing that intent."[1058] Since copyright is an automatic process, and since "lack of use or lack of litigation may, in fact, represent discretion, not laziness or an interest to abandon",[1059] the only works that would definitively qualify as abandoned under current law would be those released into the public

[1053] Menell, p. 1063.
[1054] Hansen et al., p. 37.
[1055] Hansen et al., pp. 39-40.
[1056] Shawn Bentley Orphan Works Act of 2008, S. 2913 (110th Congress). See < https://www.govtrack.us/congress/bills/110/s2913 >.
[1057] Robert Burrell and Emily Hudson, "Property Concepts in European Copyright Law: The Case of Abandonment". In Helena R. Howe and Jonathan Griffiths, ed. *Concepts of Property in Intellectual Property Law*. Cambridge, 2013, pp. 205-231.
[1058] Patry 2016, § 5:155.
[1059] Patry 2016, § 5:155.

domain by rightsholders.[1060] Nevertheless, de facto abandonment could be taken into account in fair use considerations; when good-faith efforts to obtain consent do not turn up a prospective owner, or when creators systematically discard or destroy works deemed to have no economic value (e.g., television stations taping over broadcasts), the presumption of fair use could be considered much stronger.[1061] Proposals have been floated to incorporate abandonment provisions into copyright law in order to foster preservation activities, including one that would designate as abandoned intellectual works that have not been commercially available for five years, with the stipulation that this would only permit digital copying and lending by libraries and archives.[1062]

iii. Restoration of Formalities

The copyright deposit requirement also stands as a preservation-minded intellectual property rationale – a formality (*pace* Berne)[1063] that enables the survival of cultural works.[1064] Legal deposit to secure copyright protection was established by the Copyright Act of 1870; the Copyright Act of 1976 amended this to make deposit optional except when bringing an infringement action. The copyright holders of all works published in the United States must deposit two copies of that work with the Library of Congress (or one copy of a foreign edition, if it is a foreign holder registering the copyright) in order to register the copyright or pursue an infringement suit. If a deposit is not made, the Register of Copyrights may demand a deposit, and if this is not fulfilled within three months, a fine can be levied and the copyright made void.[1065] The Library does not keep all the works it receives; even with its enormous space allotments, it cannot preserve everything it obtains. Furthermore, hardship exemptions in the provision, and the motion picture borrow-back system, meant that the Library did not always receive or retain copies of works it would otherwise seek to preserve.[1066] Restoring formalities such as mandatory deposit and registration to secure a copyright, while overtly rejecting Berne, would at once ease the orphan works problem (by facilitating traceability of rightsholders) and foster long-term preservation of the copyrighted works (through the accession of at least some of those works into

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[1060] But see Bell 2001, at pp. 793-798, arguing for an expanded notion of abandonment that allows rightsholders to choose to surrender copyright in order to secure common-law protections (and, possibly, for courts to force them to do so).

[1061] Patterson and Lindberg, at p. 206, assert that evidence of abandonment of copyright is virtually always held as fair use, though no case law is cited in support. At least one lower-court decision has found that willful destruction of news broadcasts may surrender all claims to copyright, not just legitimate fair use in third-party copying of the broadcasts. *Pacific & S. Co. v. Duncan*, F. Supp. 1186 (N.D. Ga. 1983), aff'd in relevant part, 744 F.2d 1490 (11th Cir. 1984).

[1062] Ryan, pp. 167-168. See also Matthew W. Turetzky, "Applying Copyright Abandonment in the Digital Age". *Duke Law & Technology Review* 2010, No. 019.

[1063] Indeed, deposit requirements of some kind survived even in countries that eliminated other formalities in order to comply with Berne's strictures. Gillian Davies, "Compulsory Deposit of Sound Recordings". *Recorded Sound* 62 (1976), pp. 518-527.

[1064] Menell, pp. 1026-1030.

[1065] 17 U.S.C. § 407.

[1066] June M. Besek, "Copyright Issues Relevant to the Creation of a Digital Archive". *Microform and Imaging Review* 32 (2003), pp. 86-97.

the Library of Congress's collection). Recent scholarship has suggested that Berne's prohibition on formalities may not be as ironclad as some commentators have taken it to be, and that, for instance, limitations on damages for undeposited or unregistered works might help with orphan works issues without inviting much consternation from Berne signatories.[1067] R. Anthony Reese has suggested that copyright holders should be required to deposit copies whenever they reissue works commercially in a new or updated format, so that preservation institutions bear less of the burden of format transfer.[1068] Nevertheless, in the current copyright legal climate, a wholesale return of deposit and registration requirements seems thoroughly improbable as a legislative action.

The renewal requirement after 28 years of protection, present in American copyright law until 1976, perhaps deserves reconsideration, as well. This bifurcation was meant to serve two functions: it moved works whose authors had no continuing interest in protection into the public domain more quickly, and it allowed authors whose works had continuing economic interest to renegotiate on more favorable terms.[1069] Renewal had its complexities; renewal terms could be and were assigned to publishers, just as the initial terms were, which weakened authors' bargaining positions and illustrated the need for an inalienable termination of transfer system. Furthermore, logistical problems occurred in cases of joint authorship or the death of the author.[1070] Yet there may be some value in rethinking the possibility of a system implementing one or more public-domain milestones, where some simple mechanism intervenes in the unbroken chain of copyright term and acts as a lever, or nudge,[1071] to move works into the public domain when copyright coverage is no longer necessary or desired. Landes and Posner's proposed system of indefinite five-year renewal terms is one such possibility,[1072] though, as noted above, it would need to be tempered by some long-term sunset limitation (and would still contravene the Berne provision prohibiting formalities). An extension system based on demonstrated commitment to preservation could be built along the lines Landes and Posner propose. After some initial *gratis* rights grant, rightsholding entities (whether the original authors or their assignees) that meet certain requirements for preserving and making accessible works under robust terms could get term extensions for those works, thereby maintaining exclusivity in the marketplace for correspondingly longer periods of time. Such a system might be as palatable to Lockeans (since it rewards continuing labor over longer time periods) as it would be to utilitarians (since it serves the dual purposes of incentivizing socially-beneficial work creation and socially-beneficial work maintenance).

[1067] Christopher Jon Springman, "Berne's Vanishing Ban on Formalities". *Berkeley Technology Law Journal* 28 (2013), pp. 1565-1582.
[1068] Reese 2012, p. 313.
[1069] Kaplan, p. 112.
[1070] Kaplan, p. 112.
[1071] Richard H. Thaler and Cass R. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness*. Yale, 2008.
[1072] Landes and Posner 2003.

iv. The DMCA

Aside from changes to the Copyright Act, preservation of digital works could potentially be built into the provisions of the Digital Millennium Copyright Act, or the law itself could be changed to better accommodate digital preservation needs. Section 1201 of the DMCA authorizes the Librarian of Congress to make exemptions to the anti-circumvention provision every three years. Each exemption applies to a specific class of works and expires after the three-year period; it must be renewed in the following rulemaking process to remain valid. In general, the Library of Congress has been quite guarded in its use of this power, though over time it increasingly approved narrowly tailored circumvention classes that facilitated fair use for education and critical commentary, disability access, or computer security testing. Preservation concerns have also surfaced; in 2003 and 2006 it approved an exemption for software and videogames in obsolete formats that require outdated hardware or software to function.[1073] This exemption was not renewed in 2010.[1074] Another provision allowed for circumvention to access computer programs with damaged hardware locks when the hardware is obsolete and the hardware parts can no longer be purchased or repaired; this was renewed in 2006 and 2010, but not in 2012.[1075] In 2015, a new exemption was approved for video games that require authenticated server connections or multiplayer server connections in order to function, when these servers have been taken down by the rightsholders.[1076]

Video games and software are the only classes of creative work that have been subject to preservation exemptions under this rulemaking process. Notably, in the 2015 final rule, DRM-protected film and video works are subject to a robust list of exemptions for fair use by students, educational institutions, film critics, documentarians, and noncommercial users, but not for preservation purposes. In 2015, a number of preservation-related proposals were rejected in the rulemaking process for other classes of creative works. An exemption was proposed for time- and space-shifting of audiovisual and digital literary works to allow users to make backup copies, but the Librarian of Congress declined to do so, arguing that these may facilitate significant infringing uses, bypassing the reasoning of *Sony v. Universal* in favor of more recent case law. Circumvention of video game console DRM was rejected as being closely associated with piracy of video games. A third proposal, for a specific music recording software, was submitted without sufficient support and was rejected out of hand.[1077]

Future rulemaking proceedings offer the opportunity to insert additional grants of circumvention to more classes of digital works for the purposes of preservation. (The suite of 2018 rulemaking requests includes proposals for exemptions related to the preservation or

[1073] *Federal Register* 68 (October 31, 2003), pp. 62011-62018; *Federal Register* 72 (November 27, 2006), pp. 68472-68480.
[1074] *Federal Register* 75 (July 27, 2010), pp. 43825-43839.
[1075] *Federal Register* 77 (October 26, 2012), pp. 65260-65279.
[1076] *Federal Register* 80 (October 28, 2015), pp. 65944-65964.
[1077] *Federal Register* 80 (October 28, 2015), pp. 65944-65964, at pp. 65959-65961.

personal backup of software, video games, and moving image works.)[1078] Even so, several general problems inhere when carving out exemptions within the framework of the DMCA. The Library of Congress rulemaking is made to classes of works, rather than types of usage; thus, no general preservation or other usage provisions can be implemented across media.[1079] Furthermore, its exemptions cannot permit the manufacture or distribution of tools to circumvent, even if they allow circumvention itself; thus, those who are granted exemptions may be unable to use them.[1080] The Library of Congress itself has indicated it believes exemptions for preservation by libraries and archives is better handled by the provisions of Section 108 than by Section 1201 of the DMCA.[1081] Finally, the exemptions are always temporary, and may be revoked after any three-year period if the Librarian of Congress believes they are no longer justified. The exemptions do not carry over, and the burden of re-establishing the need for the exemption in the next rulemaking period falls anew on exemption seekers.[1082] The legal presumption, then, is that the statute is permanent and necessary, and the exemptions are temporary and evanescent, whereas preservation-minded thinking would lead to precisely the converse conclusion.

Working within the DMCA is ultimately only a band-aid on the larger flaws of the law. The DMCA is inherently inimical to preservation values. It fundamentally frustrates the process of digital preservation for large classes of twenty-first-century creative expression as they are currently packaged and sold. Changing the law permanently to allow circumvention for preservation, however desirable, has repeatedly failed in the past; several attempts, largely at the urging of former Representative Rick Boucher of Virginia, were made in the 2000s to no avail. The proposed Digital Media Consumers Rights Act, which would have limited the DMCA's applicability to actual instances of infringement, died in the House of Representatives in 2003 and 2005.[1083] A third proposal, known as the FAIR USE Act, contained explicit provisions for permitting circumvention for fair use, preservation, and the provision of access to public-domain works; the bill died in committee shortly after being introduced in 2007.[1084]

C. Compulsory Licensing

Rather than working within, or adjusting the parameters of, existing copyright statutes, lawmakers could instead institute a sui generis legal right legitimating preservation activities. The history of sound recordings suggests a template: the compulsory mechanical license for songs. This license allows musicians to make their own recordings of existing published songs

[1078] "2018 DMCA Rulemaking Exemption Proposals". *Electronic Frontier Foundation*. Available at < https://www.eff.org/pages/2018-dmca-rulemaking-exemption-requests >.
[1079] Mazzone, pp. 89-90.
[1080] *Federal Register* 80 (October 28, 2015), pp. 65944-65964, at p. 65945; Mazzone, p. 90.
[1081] *Section 1201 of Title 17: A Report of the Register of Copyrights*. United States Copyright Office, 2017, pp. 98-101.
[1082] *Federal Register* 80 (October 28, 2015), pp. 65944-65964, at p. 65945.
[1083] Mazzone, p. 93.
[1084] Herman, pp. 209-210.

with minimal interference, while still providing recompense to the songs' rightsholders. Extending statutory licensing to, e.g., orphan works and fragile older recordings could help enable preservation activities, though it presumptively conflicts with natural-rights ideals.

The mechanical license for sound recordings, a quirk of the 1909 Copyright Act, was the first compulsory license,[1085] though proposals for similar systems (for both copyright and patent) date back to at least the 1830s.[1086] The compulsory mechanical licensing system is what makes it possible to fix 'cover versions' of any published record, without needing to request permission, contingent upon payment of a fee set by statute (which is then distributed to the copyright holders).[1087] This provision was enacted in response to a 1908 Supreme Court decision, *White-Smith v. Apollo Music*,[1088] which held that player piano rolls of musical compositions were purely mechanical components of pianola machines, not copies of musical works, and were therefore not subject to copyright.[1089] The 1909 Act brought mechanical reproductions of compositions (e.g., piano rolls and sound recordings) under the *compositional* copyright, but the compulsory license was added due to fears that the Aeolian piano roll manufacturing company was, through a series of exclusive contractual agreements with all of the major American music publishers, close to cornering the market for music available via pianola.[1090] An exclusive right to reproduce compositions via recordings was deliberately eschewed in the Copyright Act of 1909, in order to fend off the possibility of monopoly.[1091] The unintended result of this maneuver was a means by which musicians could take existing, copyrighted works as source material and make personal statements through them.

The compulsory mechanical license was instituted at a time when songs were often much more famous than either their songwriters or their performers (a musical culture much at variance with our own, at least with respect to the latter). As with philosophies of intellectual property, the mental archetype that informed notions of artistic protection in copyright debates was the printed page; the work meriting protection was encapsulated by the musical score and lyric sheet, and remained so in a legal sense until the overhauls of the 1970s went into effect.[1092] Since the technological capability for fixing discrete performances was still novel at the time, its copyright implications were uncertain. It was unsurprising that congressmen and judges of the twentieth century's first decade might conclude that such fixations as piano rolls and recordings

[1085] Robert Cassler, "Copyright Compulsory Licenses – Are They Coming or Going?". *Journal of the Copyright Society of the USA* 37 (1990), pp. 231-261, at p. 232.
[1086] Johns, pp. 274-275.
[1087] Rather than going through the federal licensing structure, most publishers instead contract mechanical licenses through the Harry Fox Agency, a nongovernmental clearinghouse that offers lower rates. The federal rate thus acts as a ceiling for licensing fees. Krasilovsky and Shemel, p. 165; Loren 2003, pp. 682-683.
[1088] 209 U.S. 1 (1908).
[1089] Loren 2003, pp. 680-681. The Court's ruling was based on the principle that copies of musical compositions would have to reproduce the actual sheet music. Since piano rolls were not staff notations able to be read by the human eye, they were not considered copies as such.
[1090] Cummings 2013, p. 28; Register of Copyrights 2011, p. 8.
[1091] Register of Copyrights 2011, p. 8.
[1092] Brauneis, p. 12.

were merely mechanical reproductions of the *real* work, captured in visually intelligible notation via ink on paper. While some contemporaneous observers noted the expressive potential of recordings,[1093] for the most part, they would have had little foresight of the centrality of recordings in the musical life of later decades. They could not have predicted that different performances, now that they could be fixed, listened to repeatedly, and compared with one another, would come to be seen as artistic creations which were desirable to consume in their own right and for which, in the minds of some listeners, there could not be a substitute.[1094] Indeed, in many musical genres, the recording came to supplant musical notation as the de facto representation of what the work *is*; many recordings are not even converted into musical notation by their creators, a development that doubtless would have been surprising to many turn-of-the-twentieth-century listeners.[1095]

Furthermore, in 1909 the world had had little experience with the manipulative possibilities of sound recording technology. Technological developments in sound capturing and processing since that time have made it difficult to continue thinking of commercial recordings as transparent witnesses reproducing an authentic past performance. Studio practices over the course of the twentieth century have moved more and more toward isolated recording of individual instruments, which are then overlaid and subjected to analog or digital manipulation. However, the craft of recording also extends to putatively faithful recordings as well; for example, the shape and placement of microphones and the fidelity of the equipment used can result in aesthetically differing 'takes' even of the same performance. Thus, while the 1909 Copyright Act extended copyright only to the art of composers, in the decades that followed, composers, performers, and record producers would all come to be seen as creative generators in the world of audio recording. Robert Brauneis lays this out succinctly: "most currently produced, commercially important popular 'recordings' are not viewed by either their creators or consumers merely as 'veridic' or 'figurative' representations of performances that occurred at a particular time and place. Rather, they are aesthetic objects in their own right, and their creators employ and combine both performance and non-performance techniques, in various degrees and at various points in the production process, to create them."[1096]

If the creative potentialities of fixed audio had been recognized at the time of the 1909 Act's passing, perhaps sound recordings would have been afforded copyright at that time, and

[1093] Cummings 2013, p. 24.
[1094] That is not to say that listeners did not differentiate between performances, or recognize an individual performer's creative interpretation; indeed, far from it – in many cases, past eras were even more attuned to the art inherent in expert performance (over and above that of expert composition) than modern listeners are. Baroque performers were expected to add tasteful improvised ornamentation to works as they performed them, and nineteenth-century musical criticism expounded at length on the relative merits of performers' interpretations of, say, operatic arias. However, since these could never before have been *fixed*, there was no prior basis for applying intellectual property principles to their manifestations.
[1095] Brauneis, p. 18.
[1096] Brauneis, p. 2.

the compulsory mechanical license would not exist in the form it does today.[1097] The latent artistic potential in performance and recording, seen from the experiences of music since 1909, seems to necessitate recognition of composers, performers, and producers all as legitimate claimants of copyright in their respective forms of expression. According to this logic, performers and producers are creators of derivative works whose new creative elements are deserving of protection,[1098] but only if granted permission by the original work's holder of the exclusive rights to do so.[1099] The compulsory mechanical license, from this vantage point, is akin to a legal fossil; it is a holdover from an era of comparative legal laxity, remaining embedded in the law as copyright practice becomes more and more restrictive around it.[1100] Yet the artistic freedom that resulted from the subsequent combination of new technological capabilities and legislative restraint was, on balance, a boon to musical creativity.

The compulsory license allows the performer to make "a musical arrangement of the work to the extent necessary to conform it to the style or manner of interpretation of the performance involved, but the arrangement shall not change the basic melody or fundamental character of the work".[1101] The exact meaning of the latter clause is fungible. Some ability to manipulate the work's contents to suit the performer's interpretation is built into the statute, and while this does not provide for wholesale changes in content (which would move the works into the derivative works category), in practice it is rarely enforced, such that performers are at liberty to interpret songs substantially in their new recordings. Most covers, no matter how wildly they diverge from the original, do not come close to spurring litigation on this point, and, indeed, many are significant departures from the original. The reworking of standards and contemporary pop tunes in the jazz tradition depends upon this (more or less) unfettered transformative work; it is practically a pillar upon which the genre as a whole rests. Jazz musicians, in releasing new versions of others' tunes, typically use the compulsory license rather than seeking derivative work permission.[1102] Popular musicians in other styles have also produced covers that offer new perspectives on songs or bring them to new audiences; performers can imbue them with their own personal tinges and producers can meticulously refashion the resultant recording, making

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[1097] As this document neared completion, Congress was considering changes to the compulsory mechanical license that would change the license acquisition and rate setting procedures, in ways that apparently could make it much more expensive to license songs for covers, especially when distributed digitally. John Miranda, "The Music Modernization Act Will Create a New Copyright Licensing Organization Called the 'MLC'. What Will It Look Like?". *Digital Music News*, May 6, 2018. Available at < https://www.digitalmusicnews.com/2018/05/06/music-modernization-act-mma-mechanical-licensing-collective-mlc/ >.

[1098] Brauneis, pp. 52-53.

[1099] This is how digital samples, for instance, are handled in practice. McLeod and DiCola, pp. 225-226.

[1100] Loren 2003, p. 710.

[1101] 17 U.S.C § 115(a)(2).

[1102] "Note: Jazz Has Got Copyright Law and That Ain't Good". *Harvard Law Review* 118 (2005), pp. 1940-1961, at p. 1945. The author of the note (who is uncredited) states this to make a point about how this legal gray area fails to recognize the originality inherent in newly recorded jazz arrangements. While affording such recognition is admirable in theory, doing so by classifying all sound recordings as derivative works would be obstructive if it meant cutting the means to make them – the compulsory license – out from under the musicians.

the compositions communicative and moving in new ways – ways sometimes only dimly perceptible in the original.[1103]

On the other hand, there is no shortage of cover songs that many, including the original songwriters, might find execrable, wishing they had never been allowed to come into being.[1104] One law review article used Madonna's cover of Don McLean's "American Pie" as a launching point for suggesting that the mechanical license ought to be scrapped entirely.[1105] With a bevy of negative critical reviews in tow, the author suggests "the public could have done without this emotionless, fast food cover of a generation's anthem."[1106] Music enthusiasts have long disparaged the slavishly re-created 'knock-off' covers released by budget record labels like Crown, Pickwick, and Diplomat in the 1950s and 1960s.[1107] These have a more recent parallel in the two sound-alike versions of Kid Rock's "All Summer Long" (credited to the groups Hit Masters and The Rock Heroes) which hit the Top 40 in the United States in 2008, due to Rock's refusal to make the song available for sale on the Apple iTunes webstore.[1108] The invective hurled at these covers implicitly stems from personality-based indignation at the unpalatable warping of a songwriter's creations; an equivalent to the moral right against tarnishment is often hailed as the legislative solution. Nevertheless, limiting the compulsory mechanical license would seem destined to quash artistic endeavor. The making and publishing of cover versions is now intimately tied to our notion of what it means for a musician to be original, and the statutory license has played a key part in making that happen. The relaxing of authorial control through the remuneration-generating valve of the statutory license has created conditions that are, in the

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[1103] A few covers in the popular music realm that exemplify this capability: the lazy, post-Summer-of-Love hangover vibe of "Dream a Little Dream of Me" as done by the Mamas & the Papas; Bill Withers's stripped-down gospel retooling of Paul McCartney's "Let It Be" (to say nothing of Joe Cocker's "With a Little Help from My Friends"); Cake's hilariously deadpan sendup of Gloria Gaynor's (or, more accurately, Perren and Fekaris's) "I Will Survive"; Alien Ant Farm's tribute to Michael Jackson in the form of a sly, winking cover of "Smooth Criminal"; José González's version of Massive Attack's "Teardrop", which sits on a knife-edged precipice of spooky intensity. Other examples are collected in Bob Leszczak, *Who Did It First? Great Pop Cover Songs and Their Original Artists*. Rowman & Littlefield, 2014; Robert Webb, *The Ultimate Playlist: The 100 Greatest Cover Versions*. McNidder & Grace, 2012.

[1104] I can imagine my examples in the previous footnote being answered with, say, Grand Funk Railroad's leaden cover of Little Eva's "The Loco-Motion", Orgy's crass take on New Order's "Blue Monday", Vanessa Carlton's naïve reworking of The Rolling Stones' "Paint It Black", Seether's lumbering rendition of George Michael's "Careless Whisper", or any of the several top-ten hits of that most notorious of cover-song scapegoats, Pat Boone. I confess to finding Boone's "Ain't That a Shame" something of a guilty pleasure; for as much as I love Fats Domino and the rollicking New Orleans rhythm & blues sound of the 1950s, I've always found Boone's breezy malt-shop rendition to have its own angular charm. Readers are encouraged to listen and make their own judgments.

[1105] Theresa M. Bevilacqua, "Time to Say Good-Bye to Madonna's American Pie: Why Mechanical Compulsory Licensing Should Be Put to Rest". *Cardozo Arts & Entertainment Law Review* 19 (2001), pp. 285-312.

[1106] Bevilacqua, p. 285.

[1107] An amateur reappraisal of these labels can be found in Larry Waldbillig, "Budget Record Labels". History's Dumpster (website), July 15, 2012. Available at < http://historysdumpster.blogspot.com/2012/07/budget-record-labels.html >. Some of the records issued by these labels might run afoul of misappropriation statutes in their presentation as commercial artifacts, but that in itself is immaterial to arguments against compulsory licensing.

[1108] Antony Bruno, "Kid Rock Goes Digital with Rhapsody". *Billboard*, October 3, 2008. Available at < http://www.billboard.com/articles/news/1043880/kid-rock-goes-digital-with-rhapsody >. "All Summer Long" is, itself, a refashioning of Warren Zevon's "Werewolves of London" and Lynyrd Skynyrd's "Sweet Home Alabama".

main, thoroughly beneficial to artistic development and the common culture, with minimal personal damage in practice to the personalities or reputations of songwriters.

Cover songs are pervasive enough to be taken for granted both by musicians and listeners; in the absence of this license (which is, in essence, a fortuitous historical accident), obtaining the rights to cover certain songs – including, surely, many of the most popular ones – would likely be prohibitively expensive, just as with sampling. Some songwriters would inevitably have chosen to outright deny certain musicians the privilege of recording their songs. Orrin Hatch, for example, related the concerns of Janice Kapp Perry, a lyricist and composer whose songs were recorded by a musician of impoverished ability. Perry told Hatch, "someone had made sound recordings of her songs that were of such inferior quality that purchasers of those recordings were returning them to the stores and remarking that they were surprised that Ms. Perry would have allowed such recordings to be made."[1109] Perry believed her reputation had been harmed by the recordings, but the terms of the license gave her no recourse in this matter. It is easy to sympathize with Perry's plight; no one wants to hear one's own work caterwauled incompetently on a published recording. Yet ultimately it is the performer, rather than the composer, who is taking the greatest risk to reputation in such scenarios.

Furthermore, if moral tarnishment were taken as basis for allowing a right of refusal for covers,[1110] this would inevitably result in regulation of content, rather than quality, posing free expression concerns. Rights of public performance have been exercised in this very way; Samuel Beckett has refused performance rights to ensembles who sought to alter the visual backdrop he envisioned for *Endgame*,[1111] and George Gershwin's estate refuses to license performance rights for *Porgy and Bess* to non-black ensembles.[1112] One wonders what would have become of José Feliciano's or Jimi Hendrix's renditions of "The Star-Spangled Banner" if the estate of Francis Scott Key had held similar control over the song's usage. Part of the advantage of statutory licensing is that it does *not* allow for selective control of expression in this way – but still offers due recompense to the rightsholders.[1113] Some musicians, no doubt, might deny *everyone* the privilege to cover, reserving their own version as the only legal expression of the musical composition. Prince, for example, was notorious for heavy-handedly guarding his copyrights, and publicly called for an end to the compulsory license for recordings, which, he protested, "allows artists…to take your music at will without your permission. And that doesn't exist in any other art form, be it books, movies – there's only one version of *Law & Order*. There's *[sic]* several versions of 'Kiss' and 'Purple Rain'."[1114] A personality-based theorist would likely find

[1109] Hatch, p. 725.
[1110] I hasten to note that Hatch does not make this case; he merely poses the example and suggests that it is indicative of some problem with the current system.
[1111] Hughes 1988, pp. 294-295.
[1112] Lessig 2004, pp. 233-234.
[1113] My argument here follows in part from Gordon 1993. Gordon's analysis suggests that this thinking is reconcilable with Lockean rights concerns.
[1114] Prince's remarks were made on the late-night television program *Lopez Tonight*. See Mike Moody, "Prince Wants Cover Versions Outlawed". *Digital Spy*, April 22, 2011. Available at <

Prince's proposal in order, as it offers greater control to the artist over the work's articulation and meaning; compulsory licensing is directly contradictory to authorial rights philosophies. Yet the compulsory license offers a concrete historical example of the value of *limiting* that control, explicitly preventing authors from monopolizing a work's interpretation.[1115]

Suppose statutory licensing schemes were devised for other areas in which there is contention between rightsholders and creative re-workers or preservation institutions. As several commentators have noted, a compulsory license for sampling would serve similar benefits; sampling and remix cultures would be given the legal mechanism they need to thrive,[1116] while licensors would have a regulatory scaffold to set up institutions ensuring payment, similar in function to the Harry Fox Agency for song mechanical licenses.[1117] This would help foster the maintenance of a class of creative professionals, in Merges's conception,[1118] allowing the original artists return on their work, while potentially avoiding the twin pitfalls of overburdens on creativity and rampant noncompliance endemic to copyright-maximalist legal environments. In a way, it takes a page from music pirates; in their legal battles with the music industry, pirate and bootleg labels in the 1950s and 1960s attempted to argue that a compulsory mechanical license for *all recordings* should be set up, modeled after the one for songs.[1119]

Carefully architected statutory licenses could do much to solve the impending problems of technological evanescence facing sound recordings. A compulsory license for orphaned works would allow them to be preserved, copied, and made publicly accessible without fear of post-hoc legal action.[1120] Since there is no way to contract with absent parties, voluntary collective licensing on the model of ASCAP or BMI is not even possible with orphan works. A state-managed fund could be paid into, and then paid out if and when rightsholders are identified; alternately, requirements of prior due diligence in searching for rightsholders beforehand, and funds held in escrow afterwards, could be instituted. A similar (or parallel) licensing scheme could be devised for works that inhere solely on decaying, damaged, or obsolete formats. In lieu of federal copyright for pre-1972 recordings, a compulsory license for reissues could do much to make out-of-print works more accessible to the public, given how many of them will likely not survive to see the light of the public domain, fifty years hence, on their current media substrates.

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http://www.digitalspy.com/music/news/a316014/prince-wants-cover-versions-outlawed.html >. See also *Lenz v. Universal Music Corp.*, 801 F.3d 1126 (2015), at pp. 2-3.

[1115] Paul Heald also notes that, in practice, music publishers typically require musical artists to forgo control of licensing, to the chagrin of artists who detest hearing their works soundtracked to commercials or employed by politicians whose platforms they find objectionable. Artists make final decisions about what their works *say*, but they have limited control over what the public decides those works *mean*. Heald 2009, pp. 26-27.

[1116] Mazzone, pp. 65-66; Netanel 1996, pp. 380-382.

[1117] Krasilovsky and Shemel, p. 165.

[1118] Merges, pp. 196-197.

[1119] Cummings 2013, pp. 133, 148.

[1120] The Office of Copyright suggested limitations on remedies for re-used orphan works if the copyright holder re-appeared; it also considered a more formal licensing system, such as the one used by the Canadian Copyright Board, but found the Canadian system lacking as a model. Register of Copyrights 2006, pp. 82-83, 93-94.

Compulsory licenses have their proponents. Neil Weinstock Netanel, for instance, noted approvingly the compulsory mechanical license's support of transformative uses of culture, while still fulfilling incentivist aims.[1121] Jethro Dean Lord, looking to the compulsory mechanical license as an archetype, suggested that out-of-print video games be subject to a cautious and bounded statutory license.[1122] William Patry used the example of the compulsory mechanical license to illustrate a reframing of copyright as a right to compensation for usage, rather than control of usage.[1123] In 2007, Holly M. Sharp outlined, in detail, a proposal for a federal compulsory license for all pre-1972 recordings.[1124] While Congress considered a compulsory license for sound recordings in 1971, the notion was ultimately rejected in favor of the Sound Recording Amendment that has defined the post-1972 sound recording copyright.[1125] However, Congress remarked at the time, "such a license may be a favorable solution if copyright owners were not independently making sound recording collections available to the public."[1126]

Conversely, compulsory licenses are not without detractors, from utilitarian, Lockean, and personality-based standpoints. Compulsory licenses are generally less economically efficient than private collective administration agreements (like those managed by BMI, ASCAP, and SESAC), which results in lower payouts to rightsholders.[1127] Lydia Pallas Loren has advocated for the repeal of the compulsory mechanical license, which she takes to be an impediment to cooperation between music industry stakeholders.[1128] Eliminating the license for the sake of consolidating authorial rights, by Loren's reckoning, would decrease friction in the market and reduce transaction costs – if taken in concert with other major overhauls, such as decoupling downstream derivative works from authors more than once removed. Certainly, that last provision would be an unsavory solution to personality-based theorists. Theresa Bevilacqua has argued, "Compulsory licenses create a mandatory non-negotiable contract where the property owner is forced to give virtually unlimited use of his work in exchange for a rate he cannot determine because a ceiling is set by the legislature."[1129] There is hyperbole, here. The "property owner" may refuse being "forced" by not publishing the work, and use of the work is not "virtually unlimited"; it is bounded by the stipulations of the license, which is narrowly construed. Bevilacqua also attacks the license on personality grounds, suggesting that some "uses of musical compositions are not only artistic travesties, but also insults to composers", but here, as elsewhere, it is hard to reconcile European-style moral rights concerns with American

[1121] Netanel 1996, pp. 379-380.
[1122] Lord.
[1123] Patry 2011, p. 180.
[1124] Sharp.
[1125] Sharp, p. 304
[1126] Sharp, p. 304. Note the Lockean-proviso undertones of the argument here; Congress's concern is ensuring 'enough and as good'.
[1127] Pierce and Schwartz, p. 123.
[1128] Loren 2003, pp. 709-711.
[1129] Bevilacqua, p. 299.

commitments to free expression.[1130] The Berne Convention recognizes only two types of compulsory licenses as acceptable; these are broadcast licenses and compulsory mechanical licenses for sound recordings,[1131] and they are more grandfather provisions than principled exemptions to authorial control. Maintaining compliance with Berne suggests that the implementation of further compulsory licenses would be an uphill battle.

Robert Cassler, in surveying compulsory license history, philosophy, and policy, suggests that compulsory licenses, such as the former license for jukeboxes and the cable transmission license, were often the result of political horse-trading. They typically arise as mutually palatable compromises between the irreconcilable positions of rightsholders (who usually want full control rights) and utilitarian balance advocates (who seek to maximize availability while still serving owner interests).[1132] Such proposals will likely be unconvincing to natural-rights advocates who see compulsory licensing as a trespass on property or an erosion of the moral integrity of works. Here, hope for midlevel agreement may be quite remote. Cassler suggests that, in these situations, balancers must make the case to legislators that the situation under discussion represents a special case, one whose specifics merits the placement of a license even though, as a general rule, they are not widespread. Perhaps, then, the degradation of ephemeral works offers a significant impetus to introduce compulsory licenses for the sake of ameliorating narrow, defined problems of access and preservation.

Conclusion

In his august history of intellectual piracy, Adrian Johns argues that debates surrounding piracy and responses to it – intellectual property, and antipiracy technology and enforcement – reflect larger-scale moral commitments relating to human liberty and freedom, the nature of political and individual rights in society, authenticity and trust, accountability, privacy, and the structure of economic relations both locally and globally. “The questions raised by [the development of] the antipiracy industry”, he puts it, “are late modern incarnations of the questions foundational to society itself.”[1133] The questions raised by copyright and preservation are similarly foundational. They illustrate deep fissures relating to socioeconomic organization, the configuration of democratic societies, and the place and function of information in culture. They concern the importance of education in civic life; the value a society places on using its past (and the human past *outside of itself*) to understand, inform, and sculpt its present and future; and the social and economic institutions that develop to capture, maintain, and provide, or limit, access to knowledge. How we conceive of the relation between copyright and preservation,

[1130] Aside from the right of attribution. For a discussion of perhaps the most profitable extent to which moral rights and free expression can accommodate each other, see Netanel 2008, pp. 215-217.
[1131] Besek 2003, p. 92.
[1132] Cassler, pp. 242-244, 255-56.
[1133] Johns, p. 508.

and how we structure that relation in practice (intentionally or haphazardly), thus merits considered attention from philosophers, policymakers, and the general public.

At the outset of this document, I asked, would an exploration of the technological properties and usage histories of physical media prompt reevaluation of how intellectual property should be theorized or implemented? Would it suggest changes to philosophical justifications for intellectual property or to the architecture of copyright as it is implemented in real-world scenarios? The problems manifest in the example media of sound, moving images, and video games indicate both questions can be answered fully in the affirmative. Copyright has failed to ensure adequate conditions for the survival of copyrightable works. As I have argued, this is damning both to the practice of copyright law and to the body of intellectual rights theory that has ignored preservation concerns. Utilitarian, Lockean, and personality-based intellectual property theorists, in essence, have completely overlooked the importance of ensuring creative works continue to exist alongside the rights granted to creators. This circumstance necessitates theoretical reassessment from each standpoint; for utilitarian and Lockean arguments, a latent scaffolding for preservation is already embedded into the theory, and merely awaits full recognition and integration. Unsurprisingly, practice, alongside theory, has lagged in providing practical means for preservation activities to occur. The legal framework for preservation, in some ways, has gotten progressively more antagonistic to preservation over time. Mechanisms such as fair use and Section 108 are key seeds for preservation in practice, but they are not enough; the steady expansion of duration and scope, marching in lockstep with the increasing ephemerality of media substrates, demand more thorough reworking of the law in practice so that the survival of cultural works is permitted and encouraged. The consequences of neglecting to do so are weighty, as I have attempted to show through analyses of the copyright and preservation histories of sound, moving images, and video games. As Abby Smith of the Council of Library and Information Resources has put it for sound,

> [T]he body of recorded sound that has been produced since its inception in 1877 already constitutes one of the greatest creative, historical, and scientific legacies of the United States. Given the importance of recorded sound to our economic well-being, cultural enrichment, and ability to stay informed by means of radio, television, and the World Wide Web, it is alarming to realize that nearly all recorded sound is in peril of disappearing or becoming inaccessible within a few generations.[1134]

Smith's comment also points to the value of incorporating longer-term thinking about the impacts of law and policy, and future work building on this dissertation might seek a synthesis of the core tenets advanced here with other philosophies thinking holistically about the interplay of time and culture. Recent intellectual movements have highlighted the importance of broadening our sense of costs and consequences to progressively larger scales of time and place, in recognition of the ability of human action to result in important effects on those scales. Stewart

[1134] National Recording Preservation Board, *Capturing Analog Sound for Digital Preservation: Report of a Roundtable Discussion of Best Practices for Transferring Analog Discs and Tapes*. Council on Library and Information Resources, 2006, p. v.

Brand and Gregory Benford have suggested the importance of thinking on the scales of century and millennia, rather than years and decades.[1135] Carl Sagan wrote of the way the exploration of space fundamentally changed human consciousness.[1136] James Boyle, analogizing from the environmental movement, suggested that maintaining a vigorous public domain requires rethinking the way information and information carriers are interconnected.[1137] Environmental considerations, conversely, can also militate against preservation. For instance, changes to the E-6 development process for photographic film in the 1980s resulted in the use of less ecologically damaging chemicals, but also weakened the chemical fixative, making color fade more quickly over time.[1138] Questions about responsibilities toward the future quickly get philosophically thorny; there is a robust literature on the concept of intergenerational justice in a broad spectrum of domains, opining on what, how much, and in what capacities the present owes the future.[1139] Yet facing those questions has never been more important, since we are capable of doing more to shape what the future looks like, intentionally or unintentionally, than ever before in human history.[1140] What we choose to preserve, and what we allow to be preserved, shape that future, too.

Preservation, then, is long-term maintenance of the past on behalf of the present and the future. The activities of those who preserve culture are species of upkeep and repair, necessary in order to maintain civil order and civic life among the billions now living. Buildings, water and sewer lines, transportation networks, power grids, and communications infrastructures[1141] – to say nothing of humbler things like sailing fleets and canal irrigation systems[1142] – all require constant maintenance to continue functioning, or to be adapted in order to keep them useful in a changing world.[1143] So, too, do social and political structures, in a more metaphorical sense; to choose only one obvious example, the Constitution provides for its own repair through the amendment process, and is supplemented by the practice of judicial review, which maintains the document's force in practice by excising legal accretions that contravene it.[1144] Culture, in the end, is no different. It decays, and without intentional and focused intervention, survives only through luck. We are lucky – astonishingly lucky – to have the Dead Sea Scrolls, but we should never think that we could systematically rely on chance and benign neglect to ensure the survival

[1135] Stewart Brand, *The Clock of the Long Now: Time and Responsibility*. Basic Books, 2000; Gregory Benford, *Deep Time: How Humanity Communicates Across Millennia*. Avon, 1999.
[1136] Carl Sagan, *Murmurs of Earth: The Voyager Interstellar Record*. Random House, 1978, p. 4.
[1137] Boyle 2008, pp. 230-248.
[1138] Bergeron, p. 13.
[1139] A useful starting point in this voluminous literature is Lawrence B. Solum, "To Our Children's Children's Children: The Problems of Intergenerational Ethics". *Loyola of Los Angeles Law Review* 35 (2001), pp. 163-233.
[1140] For a thoughtful reflection on the multifaceted nature of this observation, see Alexander Stille, *The Future of the Past*. Farrar, Straus and Giroux, 2002.
[1141] Henry Petroski, *The Road Taken*. Bloomsbury, 2016.
[1142] David Edgerton, *The Shock of the Old: Technology and Global History Since 1900*. Oxford, 2007, pp. 75-102, esp. at pp. 76, 91.
[1143] Stewart Brand, *How Buildings Learn*. Penguin, 1995.
[1144] *Marbury v. Madison*, 5 U.S. 137 (1803).

of the global documentary record.[1145] In order for that record to survive, it must be shored up, monitored, copied, and distributed – and processes must be implemented to ensure these activities may and do occur. That much of this work often occurs in unlikely places, quietly, with little fanfare and, at times, under nebulous legal circumstances, should not serve to obscure that work's value, nor the importance of permitting it to continue unimpeded.[1146] Social theorists and historians of technology have recently begun paying more attention to processes of repair and maintenance.[1147] It is the central argument of this work that intellectual property philosophers and policymakers are beholden to do so as well. Integrating preservation with the literature on cultural maintenance and repair suggests another viable avenue for future theory.

The work that librarians, archivists, and museums do, and the private citizens whose activities mirror their work outside of their professional ambitus, is often termed both *preservation* and *conservation*, as I noted early in the document. I have focused on the former term, but the latter is also taken as an umbrella for the suite of activities, policies, and social structures that ensure things – objects, practices, ideas – that exist now will continue to exist in the future. What conservation accomplishes is *conserving*; what conservation workers do is *conserve*, and the word refers not only to actions taken but also to values held. There is thus some meaningful sense in which those who practice conservation are *conservatives*. This is not mere tautology. It suggests a broader definition, or synthesis, of the idea of conservatism – one at odds both with the hodgepodge of often mutually incompatible tenets that are taken to fall under modern political conservatism, and with the cartoon exaggeration of conservatism that is so often pilloried in academic circles. It is a conservatism closer to Edmund Burke's conception,[1148] one that would unite the importance of preserving traditions and heritages with concepts of sustainability and good stewardship – in the words of Roger Scruton, a "partnership between the dead, the living and the unborn."[1149] It is a conservatism that would foreground the vital role all

[1145] The Dead Sea Scrolls also provide something of a cautionary tale on the possible ill effects of inadequate preservation techniques on original documents. Copying – through photography and digital imaging – became crucial to ensuring the legibility of many of the scrolls damaged by poor handling and reconstruction techniques in the early years following the scrolls' discovery. James VanderKam and Peter Flint, *The Meaning of the Dead Sea Scrolls*. HarperSanFrancisco, 2002, pp. 62-75.

[1146] To an extent, this statement is compatible with the idea of 'surfacing invisible work' developed by Susan Leigh Star. Studies of infrastructure have made frequent use of the concept in two complementary ways. The first is that good design is often taken to mean that systems should be built to appear seamless and unobtrusive, and so become manifest in the consciousness of their users only when they break down and require fixing. The second is that much repair and maintenance occurs through labor-intensive processes that often result in little acknowledgment or remuneration. The phrase 'surfacing invisible work' is hyperbole, and would be especially so in the current context; no grand scheme hides the maintenance of cultural objects, and anyone with the interest to look could have seen the preservation activities, formal and informal, that I describe. Nevertheless, as descriptive, empirical insights, both senses in which the phrase is employed are useful. Susan Leigh Star, "The Ethnography of Infrastructure". *American Behavioral Scientist* 43 (1999), pp. 377-391.

[1147] E.g., Stephen Graham and Nigel Thrift, "Out of Order: Understanding Repair and Maintenance". *Theory, Culture & Society* 24 (2007), pp. 1-25.

[1148] A basic application of Burke's philosophy to conservation is given in David Lowenthal, "Stewarding the Future". *CRM: The Journal of Heritage Stewardship* 2 (2005), pp. 1-17.

[1149] Roger Scruton, "Conservatism Means Conservation". *The Modern Age* 49 (2007), pp. 351-359, at p. 352.

of these concepts play in ensuring, and enhancing, the perpetuation of stable free societies, cognizant of the past and its lessons for the future. Hammering out the contours of that synthesis, however, must be left to future scholarship.

I initially framed this essay with a poem, one that is not about the preservation of culture per se, but which, I alleged, was useful if read allegorically. I am not the only one whom the problems of preservation has driven to poetry; another bit of verse, Percy Bysshe Shelley's "Ozymandias", repeatedly makes its way into discussions of the pressing need to think harder about permanence in a world of constant change.[1150] It is too difficult to resist the lure of Shelley's metaphor. Faint traces of a monumental creative work, blasted by time and the elements (and perhaps war as well), suggest the glory and hubris of a past civilization, one which surely thought it would last forever. The statue, like the culture that built it, is abandoned and forgotten – or, like the ancients excavated in stories such as *Motel of the Mysteries* or *A Canticle for Leibowitz*, fundamentally misunderstood.[1151] What is perhaps even more sobering about contemplation of Shelley's statue is the thought of all the works around it the desert had already reclaimed completely.

We are deprived of ourselves – our own histories as persons, nations, and cultures – when copyright leaves works to disintegrate. An intellectual property regime that extends so long and so hampers access to and preservation of these materials is one that dries the lake of culture far more than intellectual property philosophy can justifiably defend. We should instead seek to shape theories and institute policies that would, in time, set these works, as Yeats put it, "upon a golden bough to sing, / to lords and ladies of Byzantium / of what is past, or passing, or to come."

[1150] McDonough 2010, p. 49; Cloonan 2015, p. 14; Basbanes, p. 61; Roger Kimball, "Introduction: The Future of Permanence in the Age of Ephemera". *The New Criterion* 35 (2016). Available at < http://www.newcriterion.com/articles.cfm/Introduction--the-future-of-permanence-in-an-age-of-ephemera-8540 >. See also Lowenthal 1985, p. 245.
[1151] David Macaulay, *Motel of the Mysteries*. Houghton Mifflin, 1979; Walter M. Miller, Jr., *A Canticle for Leibowitz*. J.B. Lippincott, 1960.