

UC Irvine

UC Irvine Previously Published Works

Title

Copyright and the newmaterialism

Permalink

<https://escholarship.org/uc/item/5pr98582>

ISBN

978 1 78471 661 5

Author

Burk, DL

Publication Date

2016-07-29

Peer reviewed

2. Copyright and the new materialism

Dan L. Burk

1. Introduction

Copyright constitutes the primary legal regime under which proprietary interests in expressive creation are governed. Despite decades of litigation and legislation, copyright law continues to provide a poor fit to digital media, resulting in counterproductive and often bizarre policy outcomes. In this chapter, I discuss how the loosely affiliated forms of critical studies denominated “new materialism” might illuminate our understanding of such problems. New materialism confronts the dualism of tangible and intangible property that undergirds current copyright. After describing such dualisms in copyright, and examining the current controversy this creates regarding “first sale” or exhaustion of digital copies, I suggest how a new materialist approach might point the way to more sensible outcomes.

2. New Materialism

During the past several years, an increasing number of scholars in a variety of fields have begun to re-emphasise the centrality of matter in their exploration of the world.¹ This “new materialism” has been characterised at least in part as a reaction to the “discursive turn” during the latter years of the twentieth century that over-emphasised the cultural and semiotic dimensions in our understanding of the universe. The approach has become particularly important in the area of “digital humanities”, where the digitisation of traditional expressive forms, or the

¹ Rick Dolphijn and Irsi van der Tuin, *New Materialism: Interviews and Cartographies* (Open UP 2012); and Diana Coole and Samantha Frost (eds), *New Materialisms: Ontology, Agency, Politics* (Duke UP 2010).

development of new digital expressive forms, fundamentally implicates the connectivity of the virtual and the material.²

The literature associated with new materialism is diverse, mutable and rapidly evolving, but certain stable traits can be observed. Drawing on multiple theorists from Deleuze to Latour, scholars in disciplines across the humanities and social sciences have begun rejecting the physical dualisms that pervade even postmodern analyses, attempting to develop a coherent understanding of observed phenomena. Such dualisms persist despite the explicit and familiar critiques of feminism and other critical disciplines. New materialist commentators are not so much concerned with eliminating such dualisms as with re-appropriating them. By traversing the distinctions between dualistic pairings, new materialists hope to bridge and transform what are often portrayed as polar opposites: mind and body; nature and culture; subject and object.

Perhaps the central analytical tool for traversing such dualisms is the recognition and mapping of interactions between the material and social contributions that must be combined in order to generate any given artefact. Some differences in approach exist in different conclaves of the new materialist literature, but whether couched as Deleuzian “assemblages”³ or Latourian “collectives”,⁴ this conceptual approach acknowledges the complex interplay of cognitive, social and physical elements that intersect in particular instances. Characteristics or affordances of any given construct are never entirely the result of physical structure nor of social meanings attributed to such structures, but arise from the combination of both. Thus Katherine Hayles describes materiality as “an emergent property created through dynamic interactions between physical characteristics and signifying strategies. Materiality thus marks a junction between physical reality and human intention”.⁵ Recognising the hybrid nature of artefacts, and allowing for the constellation of practices

² Caroline Bassett, ‘Canonicalism and the Computational Turn’ in David M Berry (ed.), *Understanding Digital Humanities* (Palgrave 2012) 105, 115.

³ Manuel DeLanda, *A New Philosophy of Society: Assemblage Theory and Social Complexity* (Continuum 2006); and Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia* (Brian Massumi tr, University of Minnesota Press 1987).

⁴ Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network Theory* (OUP 2005).

⁵ N Katherine Hayles, ‘Prologue’ in *Computing Kin in My Mother Was a Computer: Digital Subjects and Literary Texts* (University of Chicago Press 2005) 1–14, 3.

surrounding them avoids the binary misconceptions that new materialism hopes to avoid.

The new materialist literature has been particularly sceptical of the discourse of virtualism that has accompanied discussions of information technology generally, and has been frequent in descriptions of the Internet in particular.⁶ Certainly, much of the past discourse surrounding and assessing the Internet has waxed rhapsodic regarding the immaterial perfection of digital networks. Technical pioneer Nicholas Negroponte famously characterised the Internet as a technology concerned with bits and not atoms,⁷ while Internet activist John Perry Barlow characterised it as an “empire of the mind”.⁸ Digital files are portrayed as perfect copies; their transfer is described as costless and instantaneous. Internet functionality is routinely described in terms that are virtual or conceptual, frequently with some implication that gross matter has been transcended or left behind.

However, by elevating the Internet to a virtual mental or social construct, such characterisations lose sight of the tangible, unruly and sometimes unpredictable material technology that undergirds idealised perceptions. New materialism reminds us that digital technology exists within concrete limits, which are shaped by the combination of human design, physical attributes and social perception. Bandwidth, while very robust in much of the developed world, is not infinite. Computer memory is comparatively cheap, but not costless. Digital copies are accurate, but are never perfect. No one, as the saying goes, lives in cyberspace: ultimately the Internet consists of people with their seats in chairs, their hands on keyboards, interacting with an array of mediating technical devices that both connect and separate them.

Thus, for example, Jean-François Blanchette reminds us that no matter how ephemeral the logical structure of binary units that is manipulated by a computer may seem, that logic can only be realised in the material structure of substrates that are recruited to physically assume one or another of two binary states.⁹ Like all physical material, those substrates sometimes mechanically fail, chemically react, or statistically behave in

⁶ Jussi Parikka, ‘Archives in Media Theory: Material Media Archaeology and Digital Humanities’ in Berry (n 2) 85, 101.

⁷ Nicholas Negroponte, *Being Digital* (Knopf 1995).

⁸ John Perry Barlow, *A Declaration of the Independence of Cyberspace* (1996), available 30 March 2016 at https://w2.eff.org/Censorship/Internet_censorship_bills/barlow_0296.declaration.

⁹ Jean-François Blanchette, ‘A Material History of Bits’ (2011) 62 *J Am Soc for Information Science and Technology* 1042.

some unpredictable fashion. Bits are instantiated as patterns in some material, and so ultimately must behave according to the qualities of that material. The devices comprised of such materials generally function similarly, within expected ranges of engineering tolerance, but each has its own quirks, attributes and idiosyncrasies. And although the rhetoric of digital media is replete with paeans to infinite perfect copies, this façade of perfection is only possible because computing systems themselves are replete with error correction technologies that mostly successfully mask the periodic failures of semiconductor circuits, magnetic media and fibre-optic relays.¹⁰

3. COPYRIGHT IDEALISM

Copyright has long rested upon a series of deeply entrenched dualistic doctrinal structures, including the fundamental dichotomy between the immaterial “work” and its fixation in a physical “copy”.¹¹ In copyright parlance, the “work” is the conceptual, incorporeal construct to which authorial rights attach. The work constitutes a sort of Platonic ideal that may be manifested in copies. Copies in turn are defined by statute as material objects incorporating the work. Thus, so far as copyright is concerned, even expression that exists in only a single physical instantiation – what we might commonly call the “original” – is termed a “copy”, that is, a physical reflection of the idealised work.

Copyright attaches to the work at the moment when the work is fixed in a tangible medium of expression. From Gutenberg on, physical instantiation has been the choke-point at which exclusive rights may be exercised to capture the value of creative expression.¹² Although the author owns the idealised work, she accrues the legal right to control material copies. The author acquires the exclusive right to further reproduce the work in tangible media, that is, the right to generate copies. The author also acquires the exclusive right to distribute the work as fixed in tangible media, that is, the right to distribute copies.

This distinction, which was never entirely coherent even in traditional media, has broken down in the face of digital instantiations of creativity. The US copyright statute defines a copy as an object from which the

¹⁰ Scott Dexter, ‘The Esthetics of Hidden Things’ in Berry (n 2) 127.

¹¹ Dan L Burk, ‘Feminism and Dualism in Intellectual Property’ (2007) 15 *Am U J of Gender, Social Policy & Law* 183, 187.

¹² Paul Goldstein, *Copyright’s Highway: From Gutenberg to the Celestial Jukebox* (rev. edn, Stanford UP 2003).

work can be perceived, reproduced or otherwise communicated, either directly or with the aid of a machine.¹³ The provenance of this definition is fairly straightforward when the work is fixed on paper, canvas or stone, or even in the case of more exotic analogue media such as microforms, where a device is necessary to view the stored copy. The application of the definition is more difficult in the case of digital media, where no copy of the work is stored – not even a tiny one, or an encoded one – but rather where sequences of bits configure a device so as to generate the work as output.

As a practical matter it is perhaps not surprising that the statutory definition of copy was nonetheless applied to digital media. Courts concluded that, because digital media could be used to generate the work as output of a computing device, the criterion of perception or communication with the aid of a machine was satisfied, bringing digitised creations within the ambit of the statute.¹⁴ This required a shift in the concept of “communicated or perceived” to include generation or reconstruction of the work. To have done otherwise held the potential to eviscerate the statute as the most valuable instantiations of creative works are increasingly digital forms. But, at the same time, embracing this dichotomy impedes not only the coherence of the law, but the development of new modes of expression.

Copyright generally contemplates fixed works; but if digital media is ephemeral or transient or virtual, then copyright doctrine could be expected to have little or no traction where computers are concerned. To deal with this problem, courts developed the doctrine of the “RAM copy”.¹⁵ Software or digitised content can only be run or displayed if the code loaded into the active memory of the machine. Courts in a number of cases have held that loading such information into a computer’s RAM in the process of accessing or using a digital file creates a copy for purposes of the statute, and if unauthorised may constitute infringement. This holding was initially controversial and remains somewhat dubious, given that such “copies” are highly transitory, at best resident in memory only while the particular software or data is in use. Moreover, unlike code written more durably to magnetic media or other static memory

¹³ 17 USC § 101.

¹⁴ Dan L Burk, ‘The Mereology of Digital Copyright’ in Jeremy Husinger et al (eds), *International Handbook of Internet Research* (Springer 2010) 135.

¹⁵ Aaron Perzanowski, ‘Fixing RAM Copies’ (2010) 104 *Northwestern U L Rev* 1067; and I Trotter Hardy, ‘Computer “RAM” Copies: A Hit or Myth? Historical Perspectives on Caching as a Microcosm of Current Copyright Concerns’ (1997) 22 *Univ of Dayton L Rev* 425.

devices, RAM copies are fated to last no longer than a particular session on a computer, and are doomed to disappear when the machine is switched off.

The result of this view is of course that, rather than constituting a medium in which no copies are to be found, digital technology, particularly networked digital technology, becomes rife with copies.¹⁶ Series of sequences of bits are reproduced in various types of memory and processors during the routine function of computers, routers, clients and servers. If RAM copies are copyright copies, then copies are continually being created on various machines and at various levels within any given machine as data is transferred from device to device. The RAM copy doctrine makes all these copies relevant for purposes of copyright authorisation, infringement and perhaps ownership.

This then leaves the problem as to the legal status of the many intermediate “copies” being created by the normal operation of networked technology: copies are everywhere, and unless the Internet is to be shut down for continual infringement, a court must find some legal workaround permitting such routine copying in order to allow the medium to continue to function. Perhaps the creation of RAM copies and other intermediate digital inscriptions is permissible under some implied licence; implicit permission might be granted when the owner of the copyrighted work makes it available on the network. Alternatively, perhaps the creation of such routine copies is fair, constituting one of the user privileges or exceptions available under the statute. Each of these theories creates its own highly fact-specific difficulties, and offers only a partial solution depending on the circumstances under which a file is initially made available.

Because of the fiction of the idealised work, current copyright doctrine holds that two consumers who possess recordings of the same music or video in some sense possess the same good simultaneously. Both consumers are said to possess the work, embedded in a tangible medium. And yet the law besides copyright simultaneously recognises separate possession and ownership of those two copies by their owners as chattel, that is to say, as moveable physical goods.¹⁷ Here the new materialist critiques of dualism and virtualism prove once again useful: from the standpoint of chattel property law it seems clear that the consumers in no sense possess the same good; rather they possess distinctly separate

¹⁶ Mark A Lemley, ‘Dealing with Overlapping Copyrights on the Internet’ (1997) 22 U Dayton L Rev 547.

¹⁷ Margaret J Radin, ‘Information Tangibility’ in Ove Granstrand (ed.), *Economics, Law and Intellectual Property* (Kluwer 2003) 395.

material goods with similar qualities – in the case of music, the objects are configured so as to prompt a machine to play back similar sounds; in the case of video, configured so as to prompt a machine to play back similar images.

Even were the objects exact duplicates of one another, they remain separate objects. Neither are the physical qualities that prompt the playback identical. This was perhaps clearer with older, analogue recording technologies; recordings on vinyl records and magnetic tape had their own distinctive hisses, pops and crackles that varied from copy to copy. Differences are less apparent with digital media, but, as we have noted, new materialist commentators are quick to point out that digital copies are not perfect clones of one another, despite the similarities they may possess in design and function. Failing to ground ownership and control of the chattels in their material character quickly leads to confusion, as I outline further below.

4. ECONOMIC IDEALISM

This disconnect between the material and the ideal is deeply embedded in the primary justification for copyright, which is primarily couched in utilitarian, economic analysis. Much of copyright policy – indeed much of the policy of intellectual property generally – is based on the problem of managing the economic fiction denominated “public goods”.¹⁸ Public goods are defined as goods having the twin qualities of non-rivalrousness and non-excludability. The first criterion specifies that the good may be consumed by more than one individual simultaneously, such that consumption of the good by one does not impair consumption of the good by others. Following from the first criterion is the second: given that multiple consumers can simultaneously enjoy the good without interference, it is not possible to exclude such consumers from enjoying the good.

Typical examples of “public goods” that are said to display these characteristics include national defence, public parks, the atmosphere or lighthouses.¹⁹ The public character of such goods is expected to lead to

¹⁸ Timothy Wu, ‘Properties of Information and the Legal Implications of Same’ (2014) Center for Law and Economic Studies, Columbia University School of Law Working Paper No 482.

¹⁹ I Trotter Hardy, ‘Not So Different: Tangible, Intangible, Digital, and Analog Works and Their Comparison for Copyright Purposes’ (2001) 26 U Dayton L Rev 212.

market failure. Because public goods are considered by definition non-exclusive, consumers can freely appropriate them once they come into existence. Yet there is still an initial cost to produce the goods. On this rationale, producers who know that such goods will be freely appropriated will decline to invest in producing public goods, and one would therefore expect such goods to be underproduced. Some social mechanism is therefore considered necessary to fund the production of such goods; in the case of parks or national defence, taxation regimes coerce payment from potential users.

Yet closer examination of the public-goods concept suggests that such goods are entirely fictional, and can be discussed only as abstractions that have been divorced from their material properties. Physical material as a rule is rivalrously consumed – that is the nature of matter; it is bounded by position, form and time. Supposedly non-rivalrous goods are ultimately defined by material properties, and the criterion of non-rivalrousness rapidly breaks down when examples of typical “public goods” are examined in context. Parks, for example, clearly have a finite capacity and are unquestionably congestible: at some point of population, crowding within the space of the park will occur and there will be interference between consumers with the use of the resource. Similarly, the atmosphere, while very large, is clearly congestible and limited, as air pollution and air traffic problems rather unmistakably demonstrate.

Why then might a clearly congestible park or atmosphere be described as a public good? Closer examination of such examples raises questions about the boundary or definition of the good under consideration. It is for example not at all clear that the good I am consuming when I visit the park is the same good being consumed by other visitors: their spot is shady and lush while mine is rough and ant-infested. Neither is it the case that the air breathed by my neighbour is the same set of molecules concurrently inhaled into my lungs. This suggests that many of the examples claimed as public goods are classified as such based on a type of category mistake: by defining the good consumed as “the atmosphere” rather than “the gas molecules in my immediate vicinity”, it appears that the good can be simultaneously enjoyed by multiple consumers.²⁰ By defining the good under consideration as “the park” rather than “the grassy area immediately around me”, it appears that the good can be simultaneously enjoyed by multiple consumers when in fact they are all consuming something distinct and different.

²⁰ Ibid. 229.

National defence, too, is clearly a matter of proximity. The range and effectiveness of military equipment extends only so far; consumers of national defence who are residing in the homeland, or near a military installation, will likely accrue greater benefit than those who are abroad. Indeed, those who are located further away from the instruments of national defence may well be consuming a different good altogether – perhaps “attenuated national defence” or “military reputation” or “national deterrent influence”. Even the famous example of the lighthouse is congestible as a matter of distance and positioning. The benefit of the lighthouse presupposes a clear and unimpeded view of its radiance; a row boat surrounded by cruise ships or supertankers can clearly be excluded from the benefits of the lighthouse.

It seems clear that the fictional category of public goods exists only by virtue of ignoring the very real material limitations on consumption of any possible example. Resources such as the atmosphere or a park are certainly subject to simultaneous overlapping access demands, but the problem with such multiple demands is that they are in fact rivalrous. This recognition transforms many ostensibly “public-goods” problems into “common-pool” problems, an entirely different set of concerns regarding allocation and management of shared but exhaustible resources. Such collective goods are subject to the “tragedy of the commons” by which unmanaged shared materials may be inefficiently depleted through unregulated appropriation. But it remains unclear whether creative works fit even this category, as users are seldom attempting to access the same physical resource where copyright is concerned. Only by abstracting away from the physical resource to an idealised level of identity can the resource be considered “public” or “common”.

Copyrightable subject matter such as music, literature or software is often said to have the non-rivalrous and non-exclusive qualities of public goods, requiring some type of specialised legal treatment in order to cure expected market failure. The justification for classifying copyrighted works as “public goods” stems in part from characterising them as sharing the same appropriability characteristics as those identified in a park or in national defence.²¹ Due to reproduction technologies, two consumers can read the same book, which is to say separate copies of the same text simultaneously without interfering with one another. They can similarly listen to the same music or view the same graphics or video in a fashion that appears non-rivalrous.

²¹ Wu (n 18).

Low-cost copying technology relatedly makes this subject matter seemingly non-exclusive; ubiquitous digital technology in particular produces myriad copies, making physical exclusion of consumers from the copyrighted goods practically impossible. While taxation or “levies” are sometimes used to fund the production of such works, more often intellectual property regimes are touted as a private-ordering solution that is superior to the incentive-distorting approach of taxation. The exclusive rights of intellectual property are therefore justified as creating legally enforceable exclusivity where natural or physical exclusivity is lacking; knowing that the law will exclude consumers from freely appropriating public goods should re-invigorate investment in their production.

And yet the new materialist critique that we have already begun regarding the concept of an idealised work, and which we have now extended to the concept of idealised public goods, makes the concept of copies as public goods doubly suspect. Just as public-goods analysis indulges in a category mistake by equating my molecules of air with another’s molecules of air, or my patch of the park with another’s patch of the park, so public-goods analysis of copyright mistakes two artefacts with similar qualities for the same artefact. It is the concept of the work that enables this sleight, conflating my music file with another’s music file because they have in some way the same intangible essence. The mistake is the same whether the material affordances of the artefact are analogue or digital.

5. COPYRIGHT MATERIALISM

Copyright began, perhaps ironically, firmly grounded in a type of materialist necessity. In a world of medieval scriptoria, where text and images were reproduced by hand, the labour and investment attending each copy guaranteed scarcity and facilitated control over the few copies available. With the advent of the printing press, copies became cheaper and more plentiful; subsequent technologies, including the mimeograph, photocopier, word processor, tape recorder, VCR and Internet, extended and accelerated this trend. As advancing copying technology facilitated cheaper reproduction of creative works, unauthorised appropriation without payment to the author became more frequent.

Consequently, copyright law evolved to focus the act and output of media reproduction as the control point at which to apply legal exclusivity, relying on the practicalities of physical location, immanence and capital investment to ensure detection and enforcement of infringement. Copying long required expensive and evident printing plants, warehouses

and transportation. Quick and inexpensive digital copying has now become readily available to a majority of consumers in developed and even developing countries. But long before the proliferation of cheap and ubiquitous digital copying technology, copyright doctrine had increasingly divided the physical from the conceptual, relying on the fictional construct of the “work” to justify exclusivity over classes of similarly configured media artefacts, and to define the boundaries of who would or would not enjoy such exclusivity.

Perhaps the most striking example of the copyright dichotomy between the ideal and the material is found in copyright’s first-sale doctrine, sometimes termed the exhaustion doctrine.²² The fiction of fixation implies that the exclusive rights of a copyright holder will attach to physical objects bearing particular characteristics: the sounds, colours, shapes, textual markings, or other qualities associated with the copyrighted work. The objects are typically made available to purchasers such as consumers who value those qualities. As in any other legal transfer of ownership, the purchaser of a material object imbued with those characteristics is generally held to be the owner of the particular object purchased. Ownership of a material object or chattel typically carries with it the right to dispose of the object as the owner sees fit, including transfer of possession by gift, sale or other conveyance.

At the same time, copyright law grants copyright holders the exclusive right to distribute copies – that is to sell or provide to the public material objects in which the work is fixed.²³ This exclusive right potentially conflicts with the ability of the owner of the material copy to effect a transfer or other disposition of the physical object as chattel property; the owner of the chattel has the right to transfer it, but the owner of the copyright has the right to prevent such a transfer by virtue of the object constituting a copy of the work. If the exclusive right of distribution were given priority, authorisation of the copyright owner would be needed for resale or other transfers of books, sound recordings, toys, videos or other fixations of their works. Copyright owners might be able to prevent transfers of such items entirely, or to collect fees in return for permission to gift, lend or re-sell copies.²⁴

However, because we tend to dislike restraints on alienation of personal property, copyright law provides limits on the copyright owner’s

²² On the exhaustion doctrine, *see* Susy Frankel, Chapter 8 in this volume.

²³ 17 USC § 106 (2012).

²⁴ *See* Pascale Chapdelaine, ‘Living in the Shadow of the Intangible: The Nature of the Copy of a Copyrighted Work, Part I’ (2010) 23 *Intellectual Prop L J* 83.

distribution right. The first-sale doctrine specifies that after an authorised transfer of the copy, the copyright owner's distribution rights are cut off or exhausted. This leaves the purchaser generally free to dispose of that particular copy as he wishes, including gift, lending or resale.²⁵ First sale is thus the basis for numerous familiar institutions in the secondary market for physical copies, including second-hand bookshops, used CD and record shops, public libraries and Netflix DVD rentals.

But if no material object is transferred by the sale of a digitised work, how can it be subsequently transferred by the purchaser? Downloads of music, movies or e-books involve reproduction – the creation of new files copied in the machine of a purchaser. Subsequent transfers of such files create more copies by replicating the files – but no copies are distributed under the statutory definition, which is to say, no material objects move from place to place across the Internet. Consequently, it has been unclear and controversial how the first-sale doctrine might apply to digital works – first sale applies to distributions, not to reproductions.²⁶

This is a transcendental distinction with immediate practical consequences. In the US, businesses such as ReDigi, which attempt to create a secondary market in digital files similar to the market in used books or CDs, have found themselves the subject of copyright infringement suits.²⁷ ReDigi makes available software that manages and centrally catalogues the music files that subscribers wish to sell. When a purchaser wishes to acquire a file that is offered for sale, upon payment, the software transfers the file to the purchaser's device, and erases it from the seller's device. The "external" process is of course a reproduction of the initial file. But "internally", transfer of the "used" file by writing the file to the equipment of the purchaser, while simultaneously erasing the file from the equipment of the seller, results in the outcome that would occur after a physical transfer. Just as a physical distribution of a copy removes the copy from one place to another, so in a ReDigi transfer the file is gone from the initial location under the control of the seller, and resides instead at a new location under the control of the buyer.

The position of recording-label copyright holders regarding such a secondary market is of course the external view that no first sale can

²⁵ 17 USC § 109 (2012).

²⁶ Ruth A Reese, 'The First Sale Doctrine in the Era of Digital Networks' (2003) 44 Boston Coll Law Rev 577; and Joseph Liu, 'Owning Digital Copies: Copyright Law and the Incidents of Copy Ownership' (2001) 42 William and Mary Law Rev 1245.

²⁷ *Capitol Records, LLC v ReDigi, Inc* [2013] WL 1286134 (SDNY 30 March 2013).

occur where no physical object is transferred. Yet, at the same time, recording labels have asserted in other cases that unauthorised transfer of files does constitute a violation of their rights of distribution. If this assertion by the copyright holders is adopted, then logically such distributions should be subject to the first-sale doctrine, precisely as ReDigi has argued. In essence, the ReDigi business model accepts the premise advanced by the recording industry, but copyright owners wish to have it both ways, toggling between internal and external perspectives on the technology: digital file transfer both is and is not the transfer of a material copy.

This question of material transfer is by no means solely a US problem.²⁸ Essentially the same issue has arisen in the EU, where a recent German software case has been reviewed by the Court of Justice of the European Union (CJEU). Rather than the transfer of music files, this case centred on the transfer of software, and on the licensing of such software. The fundamental question was whether a download of computer software in return for payment was a “first sale” that exhausted the right of distribution under the EU Software Directive.²⁹ As in the US *ReDigi* case, the creation of a secondary market in used software would depend on whether such exhaustion of rights was deemed to occur.

The controversy arose over a German firm, UsedSoft, which was sued by software publishers in the course of attempting to create a secondary market for software, which is often licensed rather than sold. The business model developed by UsedSoft was to purchase unwanted or unused licences to software and re-sell them to new users. For example, if a particular firm had purchased licences to run software on five machines, and was running the program on only three machines, UsedSoft would purchase the unused capacity of two licences and resell them to another user. Sometimes the new purchaser would already be using the software and wished to expand its use to additional sites or machines. If the new purchaser of the re-sold or “used” licence lacked the software covered by the licence, the new user would download a copy in order to effectuate the licence.

Software licensors challenged this practice as a form of copyright infringement. German courts held that there was a violation of the software owner’s right of reproduction, but certified inquiries to the CJEU as to whether the right of distribution was violated. The CJEU

²⁸ Ole-Andras Rogenstad, ‘Legally Flawed But Politically Sound? Digital Exhaustion of Copyright in Europe after UsedSoft’ (2014) 1 Oslo L Rev 1.

²⁹ Directive 2009/24/EC of the European Parliament and of the Council of 23 April 2009 on the Legal Protection of Computer Programs [2009] OJ 111/16.

opined that the Software Directive, with which the German law must be compatible, contemplated no difference between a physical transfer of media containing software and a download of software over the Internet. Thus the unrestricted sale of a software licence must be treated as if a physical object had been transferred, so that that exhaustion of rights occurs whether the transfer in question is a physical object or a digital file. And, in particular, if the initial copy of the software was deleted when the new licensed copy is acquired, the right of distribution is not violated.³⁰

Yet the CJEU seems to have reached a contrary result in a subsequent decision, *Art & Allposters v Stichting Pictoright*,³¹ involving the transfer of copyrighted images between physical substrates. Allposters was a purveyor of paper poster reproductions of artists' images; customers could purchase a poster and Allposters would transfer the image from the poster on to a different medium, such as wood or canvas, to create wall hangings or other more durable decorative objects. This chemical transfer process removed the image from the poster, leaving blank paper, which was discarded. Pictoright, a collective organisation managing copyrighted graphic images, including the poster images, sued in the Netherlands for copyright infringement. But Allposters argued that the poster images were obtained by authorised, legitimate purchase, so that the copyright holder's rights in the images were exhausted by the sale, and the images could be transferred to another medium.

The question posed by the Dutch courts to the CJEU was how exhaustion was to be viewed under the EU Information Society Directive, which specifies general copyright standards for the Member States. Under the Directive, exhaustion of the copyright owner's distribution right occurs when a tangible object in which a work is fixed is subject to an authorised transfer. But the Court held that such exhaustion applies only to the form in which the work is initially fixed and transferred. It treated the transfer of images by Allposters as a "new reproduction" of the work, which was being marketed without authorisation.

This outcome appears to track the reasoning of the US court in *ReDigi*, constraining the effect of an authorised first sale to the medium in which the copyrighted work was initially embodied. The doctrinal departure from the *Usedsoft* holding can be at least partially explained by the different legal sources of the two decisions, by treating exhaustion under the Software Directive as a *lex specialis*, or particularised instance, of

³⁰ Case C-128/11 *UsedSoft GmbH v Oracle Int'l Corp* [2012] ECR I-0000.

³¹ Case C-419/13 *Art & Allposters Int'l BV v Stichting Pictoright* [2015].

exhaustion within the broader rule of the Information Society Directive.³² Nonetheless, both decisions are driven by the dualism of the material and the work, and it is perhaps worth noting that under similar facts, the Canadian Supreme Court has held that the transfer of a poster image to canvas was *not* a reproduction under the Canadian Copyright Act, specifically because it would invest in the copyright holder too much control over post-sale use of a purchased copy.³³ The *Usedsoft* conclusion can only be reached by valorising the material copy, treating digital sales as equivalent to physical transfers in order to effectuate the intent of the Software Directive, while the *Art & Allposters* conclusion can only be reached by discounting the material, ignoring the fact that the physical ink pattern from the poster was transferred from paper to canvas.

6. RE-MATERIALISATION

If, as I have argued above, the divergence of the material and the ideal has become both incoherent and untenable, how might new materialism repair such a gap, or advise us to reorient copyright law? First and most obviously, new materialism likely counsels us to jettison the idealised doctrine of “the work” and its reciprocal material counterpart “the copy”. The new materialist approach would likely be to instead traverse ideal/material dualism, treating the instantiation of creative goods as a unified whole rather than a conceptual division. This doctrinal move would in turn allow courts to avoid the mental and legal gymnastics necessary to accommodate the definitions of “copies” and “fixation” to the functional realities of digital media.

Under current copyright theory, two individuals who possess reproductions of a copyrighted work such as music or graphics are said to possess the same “work” embedded in separate copies. A new materialist approach might instead recognise that each of the individuals in question possesses not the same intangible item, but rather that each possesses a material object having qualities or affordances similar to that which is possessed by the other. Perhaps each object is configured to play back similar music when placed into a particular technical environment, and perhaps the law grants a particular author exclusive rights over objects

³² Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society [2001] OJ L 167.

³³ *Galerie d'art du Petit Champlain inc. c. Th'éberge* [2002] 2 SCR 336 (SCC).

that are so configured. But we need not worry whether the objects entail the same “work”, or how many copies of the “work” are circulating, recognising that they are unique objects with certain similarities.

Along these same lines, Kevin Collins has cannily suggested that we should perhaps refer to our legal regime of exclusivity as “type rights” rather than intellectual property: the law grants rights over objects of a certain class or type, that is, having similar material affordances. Adopting this stance frees us from having to trace the trajectory of the statutory work, or its originality, or the means or circumstances of its fixation. We need not worry whether an object was translated through space in order to trigger the exclusive right of distribution, or whether that movement may be subject to the first-sale doctrine. Instead we can focus on the disposition of the objects according to the rights granted over that particular class of objects.

Second, new materialism invites us to push past critiques of copyright a step further. Historical baggage and doctrinal peculiarities of the copyright regime have not gone unnoticed. A number of critics have noted that copyright, from its roots to its present formulation, assumes a solitary genius who generates creative works *ex nihilo*, and thus assumes sole and despotic entitlement of such creations.³⁴ This postmodern critique denounces the fictional impracticality of this romantic formulation of creativity, emphasising that in fact authors exist within particular social discourses, that the work of an author is never wholly original, drawing from myriad cultural sources, and that the meaning and value of a copyrighted work are at least in part interpretive acts of the reader.³⁵ That being the case, many of the rights and doctrinal structures based upon authorship come into question.

I have observed elsewhere that this type of copyright doctrine is fundamentally dependent on a form of mind/body dualism.³⁶ A similar, related, and familiar dualism built into the doctrine is one of nature and culture. Original expression, which is to say copyrightable expression, is that which purportedly originates with the author, and is not derived from outside sources. Factual statements, for example, are said not to be copyrightable because they originate in the causal order of the universe,

³⁴ David Lange, ‘At Play in the Fields of the Word: Copyright and the Construction of Authorship in the Post-Literate Millennium’ (1992) 55 *Law and Contemporary Problems* 139; and Peter Jaszi, ‘Toward a Theory of Copyright: The Metamorphosis of “Authorship”’ (1991) *Duke Law J* 455.

³⁵ Peter Jaszi, ‘On the Author Effect: Contemporary Copyright and Collective Creativity’ (1992) 10 *Cardozo Arts & Entertainment Law Rev* 293.

³⁶ Burk (n 11).

not from the genius of the autonomous author, who is assumed to stand outside the causal order of the universe. The critique of the “romantic author” has been a useful and important insight in unpacking such assumptions embedded in the notion of copyright. It disrupts one pole of the nature/culture dualism in copyright originality by interrogating whether expression can ever arise as the product of independent authorial genius.

However, the critique does so by subsuming authorial doctrines within the cultural pole of the dualism; the critique rests upon the social turn in the humanities, by which the significance of artefacts is largely or wholly attributed to their regard within human society. The concept of the romantic author stems from a certain cultural and historical construction of the individual’s social role, but so for that matter does the postmodern patchwork author. Both views position the creative artefact as a product of one or the other social construct. As a reaction to an over-emphasis on social construction, new materialism counsels us to look further, taking into account not only the social significance of artefacts, but their physical attributes, which are not the product of human regard, and which ultimately arise out of the intersection of human and non-human attribution.

Thus, under a new materialist approach, the notion of authorship might become further distributed beyond the network of social inputs recognised by the critique of the romantic author. New materialism has tended to emphasise the agential nature of material objects, to de-emphasise the prominence and distinction of human agents, and to explore the assemblage or collectivity of human and non-human interaction. Following this lead, authorship, and ultimately copyright, might then be defined by particularised collaborations between various agents, some of them human and some of them non-human. If matter matters, then the qualities and effects of the medium and materials engaged in the development of a creative work are as meaningful as the contributions of human agency.

This recognition of material differences could play out in different ways, depending upon their interaction with other existing copyright doctrines. Copyright has traditionally excluded from its ambit material characteristics of a copyrighted work that are dictated by non-human agency, because these did not “originate” with the human author. Thus, for example, in the famous *L Baitlin & Son v Snyder*³⁷ decision, the features of a metal or plastic novelty toy that are dictated by the nature of

³⁷ 536 F.2d 486 (2d Cir 1976).

the materials employed were held not to be taken into account in considering what features of the toy constitute copyrightable expression.

Material qualities are of course always present in the background, but in effect this rule excludes from consideration features of a creative artefact whenever material qualities rise to the level of noticeable qualities, intruding into the copyright expression analysis. New Materialism counsels regularly acknowledging the material qualities of an item as pervasive. Thus, following the human origination rule while implementing a new materialist approach that routinely takes material agency into account would exclude greater numbers of creative artefacts from copyright. By systematically recognising in creative artefacts the qualities and characteristics originating from non-human actors, but maintaining the exclusion of non-human attributes, more creations would be pushed outside the canon of authorship.

However, some other cases suggest that material qualities can be taken into account in a more holistic view of the features that comprise copyrightable expression. Following this latter line of cases, and enlarging the scope of original expression beyond that which originates with a human contributor, might result in an expanded incidence of authorship. Current authorship definitions recognise the possibility of original expressive contributions from more than one source, which is to say more than one human source. Joint authorship is recognised under the statute when multiple authors contribute original expression with the intent and expectation of creating a work that will be a unified whole. These definitions require a measure of intent or volition that non-human contributors may typically lack, but expression originating from non-human agency need not necessarily result in authorship.³⁸ Under a new materialist approach the human contributor might be considered more of a curator or steward for the assemblage of actors who contributed to the creative result.

7. CONCLUSION

The new materialist approach may offer a way out of copyright's nonsensical treatment of exhaustion in digital media. It may also point towards a more coherent analysis for other aspects of copyright, such as

³⁸ Cf Annemarie Bridy, 'Coding Creativity: Copyright and the Artificially Intelligent Author' (2012) *Stanford Tech Law Rev* 5 (discussing non-human authorial contributions).

infringement. For example, assessing the collective of human and non-human actors in a given situation may offer a metric for infringement: the collaborative relationship among a server, a consumer and an artist is not the same in the context of peer-to-peer sharing as it is in the context of commercial purchase. Rather than resting infringement analysis on idealised distinctions between the material and the virtual, what is a copy, how many copies have been instantiated, and whether they have been translated through space, courts might look to the configuration of social and material practices surrounding a particular digital reproduction. Such an infringement regime might look more like the simpler misappropriation approach advocated by Jessica Litman.³⁹ In this fashion, copyright might move towards a coherent regime recognising the primacy of matter in the development of creative expression.

³⁹ Jessica Litman, 'Revising Copyright for the Information Age' (1996) 75 Oregon Law Rev 19, 47–8.