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NOTES

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Statement of Purpose

Consistent with its unique development, The New York University Journal of Intellectual Property & Entertainment Law (JIPEL) is a nonpartisan periodical specializing in the analysis of timely and cutting-edge topics in the world of intellectual property and entertainment law. As NYU's first and only online journal, JIPEL also provides an opportunity for discourse through comments from all of its readers. There are no subscriptions, or subscription fees; in keeping with the open-access and free discourse goals of the students responsible for JIPEL's existence, the content is available for free to anyone interested in intellectual property and entertainment law.

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NEW YORK UNIVERSITY

JOURNAL OF INTELLECTUAL PROPERTY & ENTERTAINMENT LAW

PREFACE

The relevance of law journals to the legal profession is something that has been openly criticized in the past few years. Indeed, when the real world application of contemporary academic ideas can be described as both outdated and intergalactic it might be time to start rethinking the status quo. In an attempt to address some of the concerns that law review articles have "left terra firma to soar into outer space"[1] we began this term looking for new ways to provide our readers with relevant and timely information.

Beneath this cover you will find the Fall 2014 issue tackling issues ranging from the boundaries of trademark dilution in the context of free speech to a globally conscious modification of patent regulation. We also take a closer look at the often-disorienting legal doctrine of fair use in the context of the recent *Cariou v. Prince* case and close this issue with an interview discussing the evolution of fair use with one of its most dynamic architects, John Koegel.

While the topics discussed in this issue cover a broad range of information the discussions all have one thing in common- the promotion of change. While this hope for change may at times seem like an "unrealistic dream," as described by Professor Donoso, it is this hope and desire that lead many of us to the legal profession to begin with- and more personally to the ever changing fields of Intellectual property and entertainment law. This Journal aims to provide an open discourse of ideas, be them grounded or abstract, which have the potential to shape the legal future. We present seemingly abstract ideas with the understanding that they could give rise to a profound outcome. It is with this hope that we provide a home for these ideas to take root and strive to serve as a source for robust change. If this is not the role of an academic journal, then what is?

We sincerely hope you find this issue both enjoyable and enlightening.

Sincerely,

Spencer C. Joffrion
Editor-in-Chief

[1] David Segal, What They Don't Teach Law Students: Lawyering, N. Y. Times, Nov. 19, 2011 (discussing Supreme Court Justice Stephen G. Breyer's criticism of the pertinence of law review articles).

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SONG ON WIRE: A TECHNICAL ANALYSIS OF *REDIGI* AND THE PRE-OWNED DIGITAL MEDIA MARKETPLACE

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In October 2011, an online marketplace for reselling pre-owned digital music emerged. The founders of this online marketplace aptly named it ReDigi. In January 2012, ReDigi was promptly sued by Capitol Records for copyright infringement. Despite reassurances from ReDigi that its software required users to delete copies of the music before being allowed to sell it to another user, the court did not consider that safeguard relevant. The court found that the copyright holder's reproduction right was being infringed regardless. This paper examines the intersection of the law and science in copyright law. Specifically, it presents a technical way of looking at the reproduction right by explaining how digital files are stored in data storage devices and transferred over the Internet by electromagnetic signals. Ultimately, this elucidation undermines the reasoning used by the court to reach its conclusion. While ReDigi modified its software implementation to skirt any further reproduction right problems, this paper suggests ReDigi should not have had to be so obedient.

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INTRODUCTION

If you have ever impulsively purchased the latest trendy song on iTunes[1] and then, 34 repetitious plays later, wondered, "*Did I really need that?*", your salvation may have stealthily surfaced in the middle of the night only to be shot down by the sheriff before it could see the sunrise. Just like the time you purchased that Macarena CD in 1995 and then sold it on eBay five years later for a dollar, a new

[1] For those readers of the future where digital content is a relic of the past, iTunes was the leading online marketplace to buy digital media. Users could purchase music, television shows, movies, and books in digital form at prices that were usually less than their tangible counterparts.

wave of businesses have attempted to create a marketplace for the resale of previously owned digital media files. Many such businesses rely on taking a cut from your resale of that Psy album you purchased online while providing you a place to sell it at a discounted price.

This creative business prowess deserves applause, but media companies are less than thrilled. Their quarrel is obvious: As the number of secondhand sales increases, the number of new sales decreases. In some instances, media companies make nothing from the secondhand sales. Accordingly, some media companies have turned to copyright law to protect their content (and their revenue) by claiming that digital resales violate their exclusive rights[2] as owners of the content. If the first big lawsuit[3] on this issue is any indication, such copyright challenges may successfully block the development of a secondhand digital market. Nonetheless, the issue is far from decided. Given the narrow holding in *Capitol Records v. ReDigi, Inc.*, there remain viable options for startups that want to revolutionize the way digital media is bought and sold. Moreover, the *ReDigi* court's reluctance to engage the finer technical aspects of digital media, as compared to traditional media, may leave the door open for disagreement by other courts.

Section I of this note summarizes the facts of the *ReDigi* court, including an analysis of the court's decision on reproduction and distribution rights and ReDigi's attempted fair use and first sale defenses. Section II looks in depth at copyright law's reproduction right and why ReDigi was unsuccessful arguing that its business method did not infringe it. Section III identifies the technical, device-level view of digital files so that the copyright holder's reproduction right is not necessarily infringed if the files are properly transferred. Section IV quickly visits the distribution right under this view. Section V looks at the policy considerations and implications surrounding the *ReDigi* court's decision. Section VI reflects on the future outlook for previously owned digital media markets.

I
REDIGI CASE

On March 30, 2013, the Southern District of New York decided a case in which Capitol Records, a major music publishing company, sued ReDigi, a startup

[2] There are six exclusive rights granted to the owner of the copyrighted work. 17 U.S.C. § 106 (2006). The issue of reselling previously owned digital media focuses on three: the reproduction right, the distribution right, and the public performance right.

[3] Capitol Records, LLC v. ReDigi Inc., 934 F. Supp. 2d 640 (S.D.N.Y. 2013). This case is discussed thoroughly in the next section.

company that allowed its users to resell previously owned music, for copyright infringement.[4] In contrast to the historical practice of selling physical objects like compact discs or vinyl records, ReDigi resold digital media that their users had previously purchased and downloaded from iTunes. The outcome of the case turned on whether ReDigi's service involved the creation of a new – and unauthorized – reproduction of a pre-owned digital file. Despite reassurances from ReDigi that the digital file was eliminated from the subscriber's computer during upload to an individualized storage space hosted by ReDigi (a subscriber's "Cloud Locker"),[5] and hence resulted in a "migration" rather than a reproduction of the media file, the court held that a violation of Capitol Record's reproduction and distribution rights occurred once the file was stored in the Cloud Locker.[6]

A. Facts

Among the facts established at trial was the process by which a digital resale occurs. A ReDigi subscriber downloads ReDigi's Media Manager software, which analyzes the subscriber's computer to create a list of music files available for resale.[7] Only files purchased via iTunes or from another ReDigi user are eligible for resale.[8] This was a legal decision took to ensure the subscriber actually owned — instead of merely licensed — the music file so that the first sale doctrine[9] applied to all subsequent transfers.[10] After the initial analysis, Media Manager continues to run on the subscriber's computer in order to flag any attempts by the subscriber to copy or transfer the file to a remote device. According to ReDigi CEO John Ossemacher, the Media Manager software contains a "really cool forensic engine that . . . determines where the song came from, whether you're the lawful owner, whether it was moved from one computer to another and so on."[11] If

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[4] *Id.*

[5] The files stored in a subscriber's Cloud Locker are, in reality, stored on a server in Arizona. *Id*. at 645.

[6] *Id.* at 650–51.

[7] *Id.* at 645.

[8] *Id.*

[9] More information on the first sale doctrine's applicability to this case is provided *infra* Part I.D.

[10] *See* Def.'s Mem. of Law in Opp'n to Pl.'s Mot. for Prelim. Inj. at 19, Jan. 27, 2012, ECF No. 14 ("[U]nlike the terms of service for Amazon's online music store, the iTunes Terms of Sale ('iTunes TOS') formally provide that *title* to music files downloaded from iTunes *passes to the consumer*." (emphasis in original)).

[11] Matt Peckham, *How ReDigi Lets You Resell Digital Music (and Why It's a Big Deal)*, TIME (June 27, 2012), http://techland.time.com/2012/06/27/how-redigi-lets-you-resell-digital-music-and-why-its-a-big-deal.

a copy is detected, ReDigi asks the subscriber to delete it or face suspension of his account.[12]

The subscriber can choose to upload any authorized file to his Cloud Locker. The upload process is the crux of the lawsuit. While ReDigi asserts that the upload is a *migration* of the original, purchased iTunes file, Capitol Records insists that any upload necessarily involves *copying* the file.[13] Regardless of how one classifies the movement, no file is retained on the subscriber's computer.[14] Thereafter, the subscriber can choose to use the Cloud Locker to stream the music, sell the music, or transfer it back to his computer,[15] but access to the file is terminated once the subscriber sells the music to another subscriber.[16] No money is transferred between the subscribers; instead, subscribers accumulate credits from ReDigi as compensation for the sale. Subscribers may also purchase credits directly. Those credits can then be used to buy additional music, but cannot be exchanged for money.[17] Individual songs are priced between 59–79¢, which is split 20/20/60 between the seller (in the form of credits), the artist, and ReDigi, respectively.[18]

B. Reproduction Right

Artists and their record labels receive a copyright in the sound recording of their music.[19] Sound recordings are works that result from fixation in a material object called a phonorecord, which include disks and tapes.[20] The copyright owner has the exclusive right "to reproduce the copyrighted work in copies or phonorecords."[21]

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[12] *Id.*

[13] *ReDigi*, 934 F. Supp. 2d at 645–46.

[14] *Id.* at 646.

[15] *Id.*

[16] *Id.*

[17] Def.'s Counter Statement Pursuant to Local Rule 56.1 ¶ 18, Aug. 14, 2012, ECF No. 83. It should be noted that the closed credit system was adopted, at least in part, at the behest of the record labels who believed it prudent to keep the money "in the music ecosphere." *Id.* ¶ 19.

[18] *ReDigi*, 934 F. Supp. 2d at 646.

[19] 17 U.S.C. § 102(a)(7) (1990). Artists also receive a copyright in the underlying musical composition. U.S. COPYRIGHT OFFICE, CIRCULAR 56A, COPYRIGHT REGISTRATION OF MUSICAL COMPOSITIONS AND SOUND RECORDINGS (2012), http://www.copyright.gov/circs/circ56a.pdf. This was not an issue in *ReDigi* since the artists were not plaintiffs.

[20] 17 U.S.C. § 101.

[21] 17 U.S.C. § 106(1).

The Southern District of New York recognized the unprecedented nature of the *ReDigi* case from the very beginning. Unlike previous copyright infringement cases that involved duplication of digital files, the issue in this case was "whether the unauthorized transfer of a digital music file over the Internet — where only one file exists before and after the transfer — constitutes reproduction within the meaning of the Copyright Act."[22]

The court reasoned that the copyrighted sound recording constituted a reproduction of the phonorecord once fixed in the subscriber's Cloud Locker after upload. Thus, the Redigi server — a collection of hard drives in Arizona that contained the same sound recording — represented the infringing, reproduced phonorecord. The court did not care whether ReDigi characterize it as a transfer, migration, or pilgrimage because "[i]t is simply impossible that the same 'material object' can be transferred over the Internet."[23] The fact that the file was deleted on the subscriber's computer was irrelevant. Even deletion of the file located in the subscriber's Cloud Locker would be no saving grace. "Simply put, it is the creation of a *new* material object and not an *additional* material object that defines the reproduction right."[24]

C. Distribution Right

The Copyright Act also provides the copyright owner the exclusive right "to distribute copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending."[25] ReDigi did not contest that it was distributing the sound recordings.[26] Instead, it relied on defenses under the fair use and first sale sections of the Act[27] to argue it was within its legal rights to distribute the previously owned music.

D. Fair Use and First Sale Defenses

The court promptly dismissed ReDigi's fair use defense, weighing all four factors[28] in the analysis against ReDigi.[29] The court was more deliberate in

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[22] *ReDigi*, 934 F. Supp. 2d at 648.
[23] *Id.* at 649.
[24] *Id.* at 650.
[25] 17 U.S.C. § 106(3).
[26] *ReDigi*, 934 F. Supp. 2d at 651.
[27] 17 U.S.C. § 107 and 17 U.S.C. § 109, respectively.
[28] The factors to be considered in a fair use defense are: "(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the

discarding the first sale defense since, at first glance, reselling used digital music seems akin to reselling used compact discs and vinyl records. However, in contrast to physical sales, the court found it significant that the phonorecord, which was resold and redistributed by ReDigi, had already been unlawfully reproduced, as analyzed above. Since the reproduction was not "lawfully made under this title," as the first sale defense requires, the defense could provide no shield.[30] Whereas the original phonorecord created in the subscriber's computer hard drive would retain the benefit of the first sale defense,[31] under the court's interpretation, that file had been deleted, and with it went the first sale defense. Thus, the infringement of the distribution right in this case was directly tied to the court's decision about whether an illegal reproduction occurred in the first place.

The court found security in its decision due, in large part, to the Copyright Office's report on the Digital Millennium Copyright Act, which explained why the first sale doctrine should not be extended to digital works. The Copyright Office justified its reasoning for limiting the first sale doctrine by noting both the relative difficulty with which physical copies are transported as compared to digital copies, which tends to keep the resale market in check, as well as the fact that physical copies degrade over time, making them less desirable than new copies.[32] On the other hand, "[d]igital information does not degrade, and can be reproduced perfectly on a recipient's computer. The 'used' copy is just as desirable as (in fact, is indistinguishable from) a new copy of the same work."[33]

The court's proposition raises an interesting philosophical question: If digital copies are "indistinguishable," and there is no other phonorecord with which to compare, how can the court know that the phonorecord stored on ReDigi's server is a new phonorecord rather than the original? This question and others will be explored in later sections.

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portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work." 17 U.S.C. § 107.

[29] *ReDigi*, 934 F. Supp. 2d at 652–54.

[30] 17 U.S.C. § 109(a).

[31] Under a strict reading of section 109, the first sale doctrine would apply to the original phonorecord stored in a subscriber's computer hard drive only if the subscriber purchased the right to fix the sound recording in a phonorecord from a store that transferred ownership to that particular phonorecord instead of simply granting a license to use that particular phonorecord. The court never addressed this issue because it resolved the question of the application of first sale defense without regard to the phrasing of the iTunes purchasing agreement. However, ReDigi asserted that ownership was transferred. Def.'s Mem. of Law, *supra* note 10.

[32] U.S. COPYRIGHT OFFICE, DMCA SECTION 104 REPORT 82–83 (2001), *available at* http://www.copyright.gov/reports/studies/dmca/sec-104-report-vol-1.pdf.

[33] *Id.* at 82.

II
REPRODUCTION RIGHT PERTAINING TO PREVIOUSLY OWNED DIGITAL MEDIA

Once ReDigi lost its argument that uploading the digital music files to its Cloud Locker service was not an infringement of the copyright owner's reproduction rights, its remaining arguments and defenses fell along with it.[34] Thus, the critical aspect to the legality of digital media resale seems to be avoiding infringement of reproduction rights.

A. Argument Made By ReDigi

From the very start, ReDigi put itself behind the eight ball. In one of its first memorandums to the court opposing Capitol Records' motion for a preliminary injunction, ReDigi repeatedly, and unfortunately, referred to uploaded music files as "copies" of the music file on the subscriber's computer.[35] After Capitol Records exposed this vulnerability,[36] ReDigi was left trying to explain how the word "copy" was used in its colloquial sense rather than as a term meant to describe reproduction in the legal sense.[37]

ReDigi's unfortunate characterization of its uploading process is understandable given the way modern technology has altered the meaning of several common words such as "chat" and "cookie." The court tried to allay fears that it based its holding on semantics by explaining that even if no copying takes place, "the fact that a file has moved from one material object—the user's computer — to another — the ReDigi server — means that a reproduction has occurred."[38] If the court had accepted the theory that the file was moved, instead of copied, it would need an additional reason to believe that a new phonorecord had been created, as required to infringe the owner's exclusive reproduction rights. In that sense, one cannot

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[34] When the court decided that the subscriber's act of uploading was a reproduction, the court reasoned that the "reproduced" file was not under protection of the first sale defense. Thus, ReDigi also infringed distribution rights by selling the illegally "reproduced" file. From here, the court found ReDigi liable for direct and secondary infringement since it actively participated in, and benefitted from, its subscribers' infringing conduct. *ReDigi*, 934 F. Supp. 2d at 656–60.

[35] Def.'s Mem. of Law, *supra* note 10, at 9 ("The only copying which takes place in the ReDigi service occurs when a user uploads music files to the ReDigi Cloud, thereby storing copies thereof in the user's personal Cloud Locker . . . .").

[36] Pl.'s Reply Mem. of Law in Further Supp. of Pl.'s Mot. for Partial Summ. J. at 1, Aug. 8, 2012, ECF No. 87 ("The only plausible reading of this statement . . . is that uploading delivers a copy of a music file to the ReDigi cloud.").

[37] Def.'s Mem. of Law in Opp'n to Pl.'s Mot. for Partial Summ. J. at 6, Aug. 14, 2012, ECF No. 79.

[38] *ReDigi*, 934 F. Supp. 2d at 650.

help but feel that the opinion was written with a certain degree of skepticism towards ReDigi's recasting of *copying* as *migration* that pervades much of the analysis.

1. Was ReDigi's Argument Dismissed Too Casually?

No matter the operating system — Windows, Mac OS X, Linux, or Unix — all have distinct commands for "copying" as opposed to "moving" a file. When "copying," there are always at least two files in existence after command execution, but when "moving," only one file exists both before and after command execution.[39] Thus, modern technology parlance would suggest that ReDigi is well within its bounds to call its proprietary upload process a move or migration.

ReDigi attempted to use this differentiation to analogize its proprietary technology to the defendant's action in *C. M. Paula Co. v. Logan*, where the defendant transferred — one could say moved — copyrighted prints from the plaintiff's greeting cards and notepads onto ceramic plaques.[40] The images were chemically stripped from the paper they were printed on, temporarily supported by a resin emulsion, before being adhered to the ceramic plaques.[41] The court held that the affixation of the image on the ceramic plaque was not a reproduction or duplication of the print because there was no copying involved.[42] Key in its decision was the fact that the defendant legally purchased another print from the plaintiff every time the defendant wanted to make another ceramic plaque. The court also held that the first sale doctrine protected the defendant from infringing the plaintiff's "exclusive right to vend," otherwise known as the right to

[39] Usually, when a move command is initiated by the user, the operating system simply updates the link that points to the file's location on the hard drive without actually moving where the bits of the file are stored. So, if the user wanted to move the file from directory A to directory B, the operating system would internally manage the "movement" such that the link to the file appears when the user accesses directory B, but not directory A. This does not happen when ReDigi moves the file, however, because the file is being moved from one file system, the subscriber's computer, to a different file system, the subscriber's Cloud Locker. However, moving the file is probably a more appropriate description than copying the file in this case since, regardless of the actual implementation of the move command, the subscriber has no volition, intent, or knowledge of any copying. ReDigi's Media Manager software is proprietary, so a step-by-step analysis of the code cannot be performed. Assuming, however, that ReDigi was aware of the potential copyright issues, it is at least conceivable that it deliberately wrote the software to avoid creating copies. *See* Def.'s Mem. of Law in Further Supp. of ReDigi's Summ. J. Mot. at 6, Aug. 24, 2012, ECF No. 90 (explaining the upload process as "wholly unlike a copy and delete operation, which happens in two distinct steps").

[40] *C. M. Paula Co. v. Logan*, 355 F. Supp. 189, 190 (N. D. Tex. 1973).

[41] *Id.*

[42] *Id.* at 191.

distribute.[43] "[T]he policy favoring a copyright monopoly for authors gives way to the policy opposing restraints of trade and to restraints on alienation."[44]

Since each transferred print was fixed in the resin emulsion before finally being fixed on a ceramic plaque, both of which meet the definition of new material objects, the *ReDigi* court could have argued that the defendant in *C. M. Paula* actually unlawfully reproduced each copyrighted print twice. But the court, rightfully, did not. Instead, it considered the holding in *C. M. Paula* to be based on "questionable merits" and distinguished ReDigi's service from the chemical stripping that occurred in *C. M. Paula*.[45] With chemical stripping, "the copyrighted print, or material object, was lifted from the greeting card and transferred in toto to the ceramic tile; no new material object was created."[46] In contrast, ReDigi's service "creates a new material object when a digital music file is either uploaded to or downloaded from the Cloud Locker."[47]

The distinction presented by the court looks quite natural at first glance. However, this distinction seems to be contrived through clever wordplay in the name of convenience. For, when citing Nimmer on Copyright earlier, the court correctly wrote, "the reproduction right is the exclusive right to embody, and to prevent others from embodying, the copyrighted work (or sound recording) in a new material object (or phonorecord)."[48] But when analyzing *C. M. Paula* a page later, the court loosely interchanges a "copyrighted work" with a "material object," saying that one and the same were lifted from the card.[49] However, the print was transferred separately of the material object; the card (which was the material object in which the print was fixed) actually peeled away.[50] When the court's equating of the copyrighted print to a material object is juxtaposed with its explanation of the reproduction right as preventing someone from embodying a copyrighted work *in a material object*, something is amiss. It is difficult to believe that the print is a material object itself which is also embodied in *another* material object: the card, resin, or a ceramic tile. Without the card, resin, or ceramic tile, it strains logic to imagine an audience perceiving the print (i.e., work) when the

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[43] *Id.*

[44] *Id.*

[45] *ReDigi*, 934 F. Supp. 2d at 650.

[46] *Id.* at 650–51.

[47] *Id.* at 651.

[48] *Id.* at 649.

[49] *Id.* at 650–51 ("There, the copyrighted print, *or material object*, was lifted from the greeting card and transferred in toto to the ceramic tile; no new material object was created.") (emphasis added).

[50] *C. M. Paula*, 355 F. Supp. at 190.

material object is the tangible thing that allows the work to be perceived, reproduced, or otherwise communicated.[51]

If the court is steadfast in its equating the copyrighted print to a material object, in disregard of the Copyright Act's plain language,[52] then ReDigi should also be allowed to equate the copyrighted sound recording (i.e., work) to a material object as well. In essence, ReDigi would be stripping the sound recording (print) from the subscriber's hard drive (paper) and transferring it "in toto" to the Cloud Locker (ceramic tile) without reproduction just as in *C. M. Paula*. No new material object could be said to have been created because, like the ceramic tile, the Cloud Locker already existed as a material object and another material object (i.e., the sound recording) would simply be placed in the Cloud Locker. One could even consider the transitory nature of the sound recording as it passes through network equipment over the Internet analogous to the transitory state of the print in the resin emulsion.

The court would probably insist that its "copyrighted print, or material object" language was being misread. But in order to do this and still conclude, consistently with the *C. M. Paula* court, that no new material object was created, it would have to contend that the copyrighted print was still fixed in the paper when it was stripped from the paper. That contention runs counter to the stripping process in *C. M. Paula* that was described as "involv[ing] the use of acrylic resin . . . as a transfer medium to strip the printed indicia from the original surface on which it is printed. . . ."[53] Thus, *C. M. Paula* actually comports quite nicely with a favorable result for ReDigi.

Despite the aforementioned analysis, the *ReDigi* court used *C. M. Paula* against ReDigi. If the court felt persuaded to find against ReDigi for policy reasons external to the law, the best option for the court may have been just to declare that *C. M. Paula* was not precedent in the Southern District of New York and to distinguish its decision as an exercise of independent judgment in light of different facts and different time periods. Indeed, the court would have been perfectly free to do this, especially since it could have noted that the court in *C. M. Paula* (decided in 1973) was completely unaware of how technology has made copyright infringement so easy and pervasive. For this reason, the court's decision

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[51] *See* 17 U.S.C. § 101 (defining the word "copy" as the material object "in which a work is fixed . . . and from which the work can be perceived, reproduced, or otherwise communicated" and the word "phonorecord" as the analogous term to "copy" where "sounds" replace "work").

[52] *See* 17 U.S.C. § 101 ("'Copies' are material objects . . . in which a work is fixed . . . ."). So copyrighted works are fixed or embodied in material objects, colloquially known as copies.

[53] *C. M. Paula*, 355 F. Supp. at 190.

could also be understood as a response to the ease and increase in copyright infringement resulting from technological advances.

B. File Sharing Zeitgeist

A palpable undercurrent of paranoia regarding illegal file sharing runs throughout the *ReDigi* decision, despite no explicit policy argument alluding to the practice. For example, the court explicitly relies on previous cases concerning peer-to-peer file sharing systems to provide analytical guidance. Specifically, the court uses *London-Sire Records, Inc. v. Doe 1* for the proposition that an electronic download of a music file is a reproduction of the sound recording when magnetically encoded on the downloader's hard drive as a phonorecord.[54] But *London-Sire* involved anonymous users of peer-to-peer file sharing software that were copying files from other users' computers. In each instance, a copy of the file simultaneously existed on the downloader's computer, while the original was retained by the supplier. That court stated, "[plaintiffs] note, correctly, that an electronic download does not divest the sending computer of its file . . . ."[55] It continued, "because the data at point A[, the source,] is not necessarily destroyed by the process of reading it, the person at point A might retain ownership over the original . . . ."[56] Thus, the facts on which the *London-Sire* court based its understanding of the reproduction and distribution rights differ substantially from the facts in *ReDigi*. Whereas the alleged infringers in *London-Sire* retained a copy of the music file that was "not necessarily destroyed," in *ReDigi*, the original file *is* necessarily moved from source to destination without retention, as designed and implemented by ReDigi's Media Manager software.[57]

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[54] "[W]hen a user on a [P2P] network downloads a song from another user, he receives into his computer a digital sequence representing the sound recording. That sequence is magnetically encoded on a segment of his hard disk (or likewise written on other media). With the right hardware and software, the downloader can use the magnetic sequence to reproduce the sound recording. The electronic file (or, perhaps more accurately, the appropriate segment of the hard disk) is therefore a 'phonorecord' within the meaning of the statute." *ReDigi*, 934 F. Supp. 2d at 649 (quoting London-Sire Records, Inc. v. Doe 1, 542 F. Supp. 2d 153, 171 (D. Mass 2008)).

[55] *London-Sire*, 542 F. Supp. 2d at 172.

[56] *Id.*

[57] *See ReDigi*, 934 F. Supp. 2d at 646 ("[A]t the end of the process, the digital music file is located in the Cloud Locker and not on the user's computer."); *see also* Def.'s Statement of Undisputed Facts Pursuant to Local Rule 56.1 ¶ 12, July 20, 2012, ECF No. 56 ("Once a user requests to place a legally acquired phonorecord in the Cloud Locker, the file is migrated to the Cloud Locker so that it is no longer on the user's local device.").

However, the court ignored this fairly significant difference. Instead, it extrapolated from *London-Sire* the belief that the "distinction is immaterial under the plain language of the Copyright Act. Simply put, it is the creation of a *new* material object and not an *additional* material object that defines the reproduction right."[58] The only additional form of support for its opinion is a reference to the dictionary definition of "reproduction," which means, *inter alia*, "to produce again" and not, as the court says, "to produce again while the original exists."[59] While the court makes a well-founded point, it is generally difficult to know whether an object has been reproduced unless the original (i.e., source) still exists.[60]

Fortunately, we have more evidence to resolve the specific facts in this case. The Media Manager software holds the key to whether the original was reproduced or simply moved. Unfortunately, all of the technical code is protected as a trade secret.[61] Nevertheless, the technical aspects of file storage and transfer will be analyzed in Section IV, which will shed light on how files are fixed on hard drives and alleviate concerns of rampant file sharing abuse.

Before analyzing the technical details of file storage and transfer, it is important to recognize that the court was in a difficult situation. *ReDigi* presented a novel question that had never been litigated before,[62] and there was limited legal doctrine to apply to the facts of this case. So it is perhaps natural that the morally opprobrious shadow illegal file sharing casts would also influence the court. It may have been tough for the court to conceptualize ReDigi's process when, traditionally, technology has made it easier to copy files for redundancy, archival,

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[58] *ReDigi*, 934 F. Supp. 2d at 650.

[59] *Id.*

[60] For example, if your friend gives you a fruitcake as a gift and you find it so fantastic that you exactly replicate it as a return gift for your friend, it is difficult for your friend to know whether you have exactly reproduced the fruitcake or sheepishly re-gifted the one your friend gave you. If you can produce the original fruitcake (or at least parts of it), you can probably salvage your relationship since your friend will know you didn't re-gift. If you can't produce the original fruitcake, your friend will have to take your word for it but will not know for sure whether it is a reproduction or the original.

[61] This is not surprising given how profitable the software can be if it is ultimately deemed legal. ReDigi CEO, John Ossenmacher, has already admitted that they are in talks with several interested companies to license their software. "There aren't many ways to do this without copying — we know, and they know, they'd be using our technology to do it." Peckham, *supra* note 11.

[62] *ReDigi*, 934 F. Supp. 2d at 648 ("The novel question presented in this action is whether a digital music file, lawfully made and purchased, may be resold by its owner through ReDigi under the first sale doctrine.").

and distribution purposes, sometimes illegally. Not that the situation cannot be conceptualized; without the potential to resell files, ReDigi subscribers are simply migrating their files to the trashcan for deletion. Obviously, this is absurd.

In a way, the court may be thinking that it is being hoodwinked; that ReDigi, with a wink and a nod, is telling the world that it is moving the file when in reality it is copying. With these reservations, it is difficult to intuit that ReDigi is more like eBay than it is like the original Napster.[63] By exploring the technical side of file storage and transfer, the distinction becomes more palatable.

III
STORING DIGITAL FILES ON A HARD DRIVE IS FIXATION CAPABLE OF BEING MOVED WITHOUT BEING REPRODUCED

Throughout its briefing of the case, ReDigi stressed the importance of understanding its technology to understanding its defense that it was not reproducing digital music files. Even while dealing with the sort of generalities inherent in analyses of proprietary processes, an argument can still be made that ReDigi is not infringing the copyright owner's reproduction right without knowing the details of the software.

A. Fixation of Sounds in Physical Structures

Before the advent of the Internet, and certainly before anyone had heard of an "MP3" file or compact disc, music was (and still is) recorded on vinyl records. Records are made by physically pressing grooves into a vinyl disc. As seen in Figure 1a, a record player's needle follows grooves in a disc as the disc spins. The needle moves within the grooves in accordance with their vertical and lateral undulations. That mechanical movement is then converted into electronic signals by electronic circuitry. These signals are ultimately amplified and then converted back into mechanical movements by the speaker, which produces sound waves that travel to the human ear.[64]

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[63] It is certainly possible for subscribers to game the ReDigi system. Dubious subscribers could create an external copy of their music prior to downloading Media Manager, which would not flag those copies since the software is unaware of prior events. However, this activity would be occurring despite Media Manager, not in concert with it. Furthermore, those subscribers would also likely realize that there are other easier methods to obtain digital files without using a scrupulous system like ReDigi.

[64] 9 MARSHALL CAVENDISH CORPORATION, HOW IT WORKS: SCIENCE AND TECHNOLOGY 1284 (Wendy Horobin et al. eds., 3d ed. 2003).

Although sound quality improved drastically with compact disc (CD) technology, the process of storing information on CDs remained very similar to that used with vinyl discs. On CDs, audio waveforms from vocals and musical instruments are converted into binary digits through a process of sampling (or digitizing) the waveform at intervals known as the sampling period.[65] Each sample of the audio waveform creates a series of binary digits based on the waveforms' amplitudes.[66] Instead of stamping grooves into vinyl, CDs are stamped with pits to differentiate between a "1" bit and a "0" bit of the digitized sequence.[67] Figure 1b shows those pits as viewed from the topside of the stamped layer.[68] A polycarbonate plastic encasing surrounds the CDs stamped layer for protection.[69] As the disc spins, a laser (rather than a needle) changes its radial distance from the center of the disc to read the particular physical changes in the CD.[70] When the laser hits a flat part of the CD, it reflects directly into a detector.[71] When the laser hits a pit, it scatters, reducing the intensity of the beam at the detector.[72] The difference in the detected intensity stemming from the physical changes of the CD creates the bit pattern read by the CD drive.[73] Because there is no conversion from mechanical movement to electronic signals, the noise levels are reduced and the sound quality remains clear.

Apparent from this description of vinyl records and CDs is the fact that the sound recordings are physically sculpted into such phonorecords. Understood in this manner, the fixation that occurs in vinyl records and CDs epitomizes the

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[65] JOHN Y. HSU, COMPUTER ARCHITECTURE: SOFTWARE ASPECTS, CODING, AND HARDWARE 3 (2001); *see also* SCOTT MUELLER, UPGRADING AND REPAIRING PCS 525–26 (20th ed. 2011).

[66] HSU, *supra* note 65, at 3.

[67] It is actually the detected transition from flat part to pit or pit to flat part that determines whether a "1" bit is read. When no transition is encountered over a threshold period, a "0" bit is read. CDs that are burned instead of stamped (e.g., by personal CD burners) differentiate between "1" bits and "0" bits by changes in the reflectivity of the recording material. The laser in the CD burner literally heats up portions of the writeable CD's recording layer, which creates the differentiating reflectivities necessary to create bit patterns. MUELLER, *supra* note 65, at 521, 532.

[68] Since the laser and detector are aimed at the underside of the CD, the plateaus are actually seen as pits from the laser's perspective.

[69] *Id.* at 520.

[70] *Id.* at 521–22.

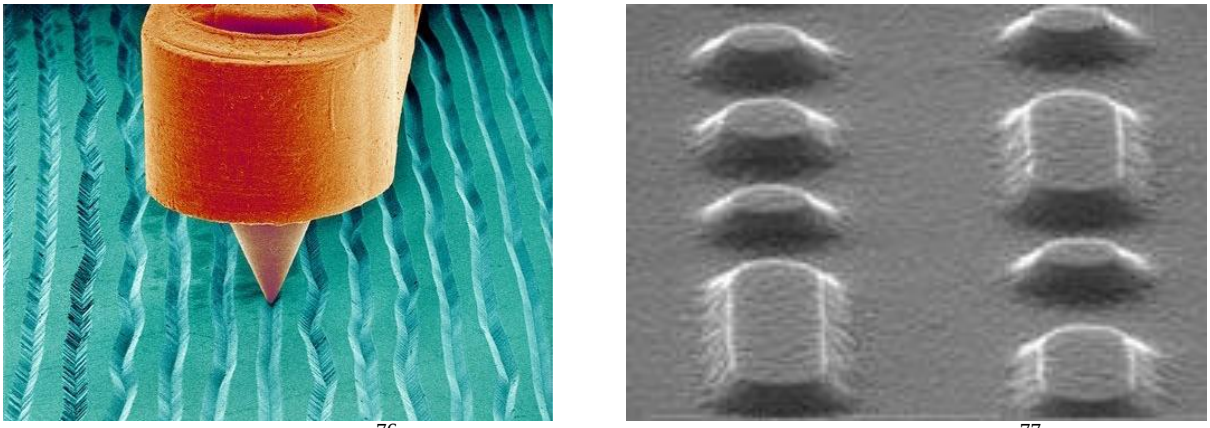
[71] *Id.*

[72] *Id.*

[73] *Id.* at 521.

prototypical fixation of phonorecords contemplated by the House of Representatives when they passed the Copyright Act.[74]

This conception of fixation also helps to explain the court's adherence to the proposition that "it is the creation of a *new* material object and not an *additional* material object that defines the reproduction right."[75] Because grooves and pits are physically sculpted as material objects into the recording layer of the disc, any *new* material object fixed with the same sound recording will necessarily be an *additional* material object. That is, the material fixation of the embedded sculpture is intimately tied to the recording layer. In this scenario, it is impossible to imagine moving the material object (i.e., the grooves or pits as a collection) without moving the recording layer of the vinyl disc or the CD as well. However, the notion of fixation changes when vinyl discs and CDs are replaced by hard drives composed of electric and magnetic fields.



(a) Vinyl Record[76] (b) Compact Disc[77]

Figure 1: Magnified images of vinyl record and CD surfaces

[74] H.R. REP. NO. 94-1476, at 56 (1976) (defining phonorecords as "physical objects in which sounds are fixed").

[75] *ReDigi*, 934 F. Supp. 2d at 650.

[76] Susumu Nishinaga, *Needle Playing a Record* (scanning electron microscope image), SCIENCE PHOTO LIBRARY, http://www.sciencephoto.com/media/215623/view.

[77] CD Scanning Electron Microscope Image, LPD LAB SERVICES, http://www.lpdlabservices.co.uk/analytical_techniques/sem.

B. Fixation of Sounds in Transferable Material Objects

When a ReDigi subscriber uploads his iTunes music from his personal computer to ReDigi's cloud service, he moves that music from a magnetic hard drive or solid-state drive to another magnetic hard drive or solid-state drive, both of which could be used as the actual storage mechanism of the server. But magnetic hard drives and solid-state drives are fundamentally different than vinyl records and CDs in how information is stored. Whereas it makes sense to describe information as fixed grooves and pits in a vinyl record or CD, that description is inapposite when describing information storage in magnetic hard drives and solid-state drives. This is because information is stored as electrical and magnetic signals (i.e., fields), which can actually be moved from one drive to another via electromagnetic waves and electrical lines that compose the current infrastructure of the Internet.[78] So although an electromagnetic representation of grooves and pits can be transferred over the Internet, the actual grooves and pits cannot be transferred over the Internet.[79]

Figure 2a shows a schematic drawing of a magnetic hard drive, specifically a single hard drive platter that stores digital information. Magnetic hard drives typically contain multiple, stacked platters, which are rigid, circular discs made from aluminum or glass.[80] Platters are divided into circular tracks, which can be further subdivided into sectors. Each sector contains a fixed number of storage layer domains, which are the physical implementations of data bits (0s or 1s).[81] When writing data, the write head element passes over the domains and impresses magnetic fields into the domains. During impression, the write head element creates a strong magnetic field at its tip (represented by the red arrows) to align the magnetic material in that domain in the same direction. The magnetic field is stored in one of two directions (represented by the black arrows).[82]

In order to read the data, the read head element passes over the domains. Instead of impressing the magnetic field like the write head element, it detects the direction of the magnetic field in each domain. If the magnetic field is constant from one domain to the next, no electrical signal is induced in the read head element, which interprets the data as a 0 bit. If the magnetic field changes from

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[78] JOHN RHOTON, THE WIRELESS INTERNET EXPLAINED 5–6, 10–11, 22 (2002).

[79] Therefore, any digital creation of a physical fixation that was transferred only with the help of the Internet, like that in vinyl discs and CDs, will necessarily involve a new fixation of the information since the original fixation could not have been transferred.

[80] MUELLER, *supra* note 65, at 445.

[81] *Id.* at 438–40.

[82] *Id.* at 422–24.

one domain to the next, an electrical signal is induced in the read head element, which interprets the data as a 1 bit.[83]

ReDigi's servers likely contain magnetic hard drives to store the iTunes music files because of their massive storage capabilities. Many of ReDigi's subscribers likely have magnetic hard drives in their personal computers as well. However, due to their rapidly decreasing prices, non-moving parts, and superior read and write speeds,[84] some ReDigi servers and ReDigi subscribers may have solid-state drives. Despite the differences between magnetic and solid-state drives, data in each is typically stored in a binary fashion.

Figure 2b shows a schematic drawing of a simplified solid-state hard drive. The drawing shows a memory unit capable of storing 32 bits of information. One bit of information is stored in each of the transistors, which are arranged into eight rows and four columns. Each bit is chosen for storing information by applying appropriate voltages to its corresponding word line and bit line.[85] The right side of Figure 2b shows an enlarged diagram of the transistor corresponding to word line six and bit line three. The transistor is composed of a silicon base and two other silicon layers (the gates) separated by two insulating layers (blue layers). Each transistor operates in two states: an "on" state (1 bit), and an "off" state (0 bit). The "off" state is programmed by applying a positive voltage to the control gate to attract a negative electrical charge (in the form of numerous electrons) into the floating gate. The transistor is erased to the "on" state when the electrical charge is removed from the floating gate by applying a negative potential to the control gate.[86]

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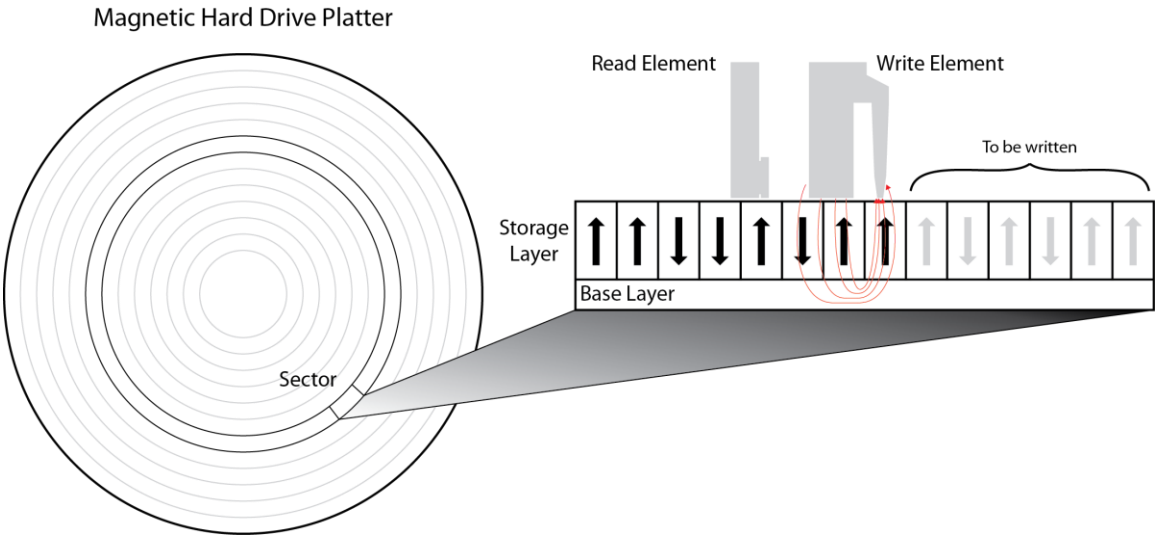
[83] This simple encoding mechanism, where no magnetic field change equals a "0" bit and a magnetic field change equals a "1" bit, is no longer used in practice because more advanced encoding techniques are available to increase storage capacity. *Id.* at 432–37.

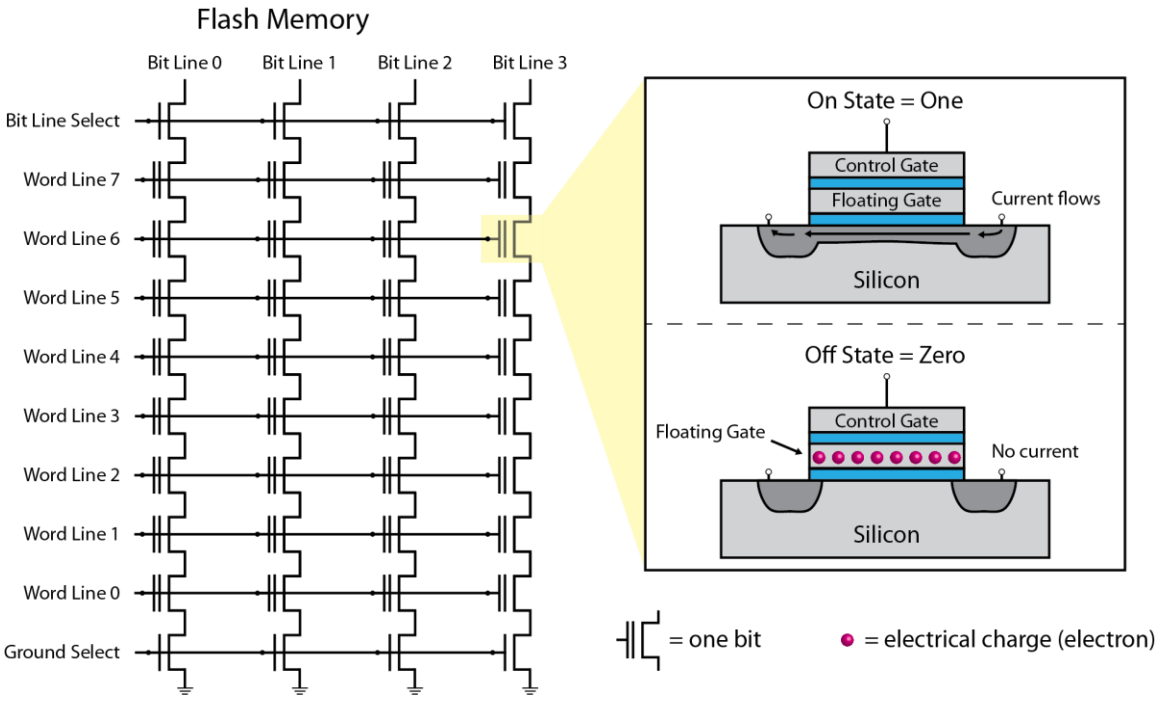
[84] *Id.* at 501.

[85] The bit line selects a certain column in the cell array and the word line selects a certain row in the cell array. All unselected cells in the series bit line are driven into a conducting mode. Thus, if the entire bit line conducts, the selected cell is "on" (conducting state), whereas if the bit line does not conduct, the selected cell is "off" (non-conducting state). RINO MICHELONI ET AL., INSIDE NAND FLASH MEMORIES 20–24 (Rino Micheloni et al. eds., 2010).

[86] GIULIO G. MAROTTA ET AL., NONVOLATILE MEMORY TECHNOLOGIES WITH EMPHASIS ON FLASH 64 (Joe E. Brewer & Manzur Gill eds., 2008).



(a) Magnetic Hard Drive



(b) Solid State Drive

Figure 2: Diagrams of fundamental storage devices for digital media

The electrical charge stored in the floating gate directly effects whether current will flow through the silicon base layer. In order to read the data stored in the transistor, the current is measured. If current flow is detected, a 1 bit is read. If current flow is not detected, a 0 bit is read.[87]

Although it is tempting to define these electrical charges and magnetic fields as fixed (in the legal copyright sense) in the drive, they are perhaps better described as *contained* or *stored* at a waypoint. This is because they are not intimately tied to the recording layer like grooves and pits, but instead are merely stored in an electronic transistor or a magnetic domain until they are transferred to a new storage unit.[88] Furthermore, because grooves and pits are physically fixed in the recording layer, they cannot be extracted and transferred in media that carry only electrical and magnetic signals.

The key point of this analysis is that when digital files are transferred from magnetic hard drives and, certainly, solid-state drives, no new material object is created because the electrical charge and magnetic fields that constitute the data are *actually transferred* from waypoint to waypoint. A more insightful way to conceptualize such data storage is to view the electrical charge and magnetic fields as material objects themselves, rather than assigning that role to the magnetic storage layer or transistor. In this schemata, every time data is transferred, the material object is transferred, which further implies that no *new* material object is created. This conceptualization posits that, upon transfer, the electrical charge or magnetic field is released from the waypoint; otherwise, the data would necessarily be copied into a new material object. And, just as the foregoing analysis indicated that electrical charge is easily stored and removed from the floating gate, magnetic fields can be stored and removed from their domains. While it may be unlikely that the exact material object in the legal sense (electron/magnetic field) is transferred from one waypoint to another, one cannot definitively say they are *not* transferred because they all appear identical to human observers.[89] This shows

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[87] *Id.*

[88] *See, e.g.*, CHRISTOPH FRIEDERICH, INSIDE NAND FLASH MEMORIES 67, 77 (Rino Micheloni et al. eds., 2010) (explaining how a programming operation injects electrons into the floating gate of a transistor cell and how an erase operation removes electrons from the floating gate of a transistor cell).

[89] DAVID J. GRIFFITHS, INTRODUCTION TO QUANTUM MECHANICS 179 (1995) ("The fact is, all electrons are *utterly identical*, in a way that no two classical objects can ever be. It is not merely that *we* don't happen to know which electron is which; *God* doesn't know which is which, because there is *no such thing* as 'this' electron, or 'that' electron; all we can legitimately speak about is 'an' electron."). In fact, John Wheeler, a well-renowned American physicist, actually postulated that there is only one electron and that all electrons are simply manifestations at a

how digital files can be differentiated from physical grooves and pits, since it is never possible for a physical, sculpture-like material object to be transferred along a medium conducive to electromagnetic signals.

Perhaps an analogy would help solidify the concept. Consider a series of five buckets at point A, of which the first three contain water and the last two do not. The five buckets at point A can be imagined to represent five bits in a "11100" sequence. One way to transfer that information is to carry the five buckets, with their contents, to point B. However, if the only way to transfer the bit sequence from point A to point B is copper tubing, carrying the buckets is no longer feasible. Nonetheless, the information can still be transferred to point B using the copper tubing, a prearranged timing protocol to know when to expect the water (if there is any) from each bucket, and five receiving buckets available at point B. Only the water, not the buckets, is essential to the communication because the water, not the bucket, is indicative of the bit sequence.[90] The water (electric charges and fields) is the material object in which the information (sound recording) is fixed, while the bucket (magnetic hard drive or solid state drive) is simply a storage container. When discussing vinyl records and CDs, however, there is no water. The shape of the bucket is the data-carrying object in this alternate universe. Although the user at point A could send color-coded water through the copper tubing to signify whether the bucket shape is, for example, cylindrical or rectangular, if the person at point B uses that information to create cylindrical and rectangular buckets of their own, we know they must be new material objects because the buckets cannot physically pass through the copper tubing.

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particular slice in time of the world line of that singular electron. Richard P. Feynman, Nobel Lecture: The Development of the Space-Time View of Quantum Electrodynamics (Dec. 11, 1965), *in* Nobel Lectures, Physics 1963-1970, at 155, 163 (1972), *available at* http://www.nobelprize.org/nobel_prizes/physics/laureates/1965/feynman-lecture.html ("I received a telephone call one day at the graduate college at Princeton from Professor Wheeler, in which he said, 'Feynman, I know why all electrons have the same charge and the same mass' 'Why?' 'Because, they are all the same electron!'"). Magnetic fields are invisible forces. So a similar conclusion can be reached knowing that magnetic fields generated by flowing electrons are indistinguishable from those generated by materials composed of magnetic domains. NEVILLE G. WARREN, EXCEL PRELIMINARY PHYSICS 74 (2004).

[90] One could just as easily imagine having a protocol where the person at point A pours whatever water is contained in a bucket into the copper tubing every minute. In that case, the user at point B only needs to stand under the copper tubing and determine which minutes of the five he or she gets wet to receive the communication.

It is this conceptual difference the court was unwilling to recognize in its *ReDigi* opinion. Instead of discussing the physics of storing digital information in magnetic and solid-state drives, the court chose to make a conclusory declaration that "[i]t is simply impossible that the same 'material object' can be transferred over the Internet."[91] Axiomatically, the court stated, "[t]his understanding is, of course, confirmed by the laws of physics."[92] However, if courts are going to premise infringement of reproduction rights on the creation of a new material object, it is critical that they recognize what fits that category. With today's modern technology, the line differentiating material objects from containers storing such objects has become clearer. Though the two are essentially indistinguishable with vinyl records and CDs, they can be conceptually separated in modern mass storage devices.

IV
DISTRIBUTION RIGHT PERTAINING TO PREVIOUSLY OWNED DIGITAL MEDIA

Even if ReDigi did not infringe the copyright owner's reproduction right, the company openly admitted to distributing the iTunes music files from its website.[93] Without a proper defense, this constitutes direct infringement of the copyright owner's distribution right under 17 U.S.C. § 106(3). Accordingly, ReDigi asserted the first sale defense, which entitles "the owner of a particular copy or phonorecord lawfully made under this title, . . . without the authority of the copyright owner, to sell or otherwise dispose of the possession of that copy or phonorecord."[94] However, the court rebuffed ReDigi's attempt to use the first sale defense because "as an unlawful *reproduction*, a digital music file sold on ReDigi is not 'lawfully made under this title.'"[95] Obviously, this conclusion is dependent upon the court's finding that the phonorecord uploaded to the ReDigi server is a *new* reproduction of a phonorecord. And because the court believes it is "impossible for the user to sell her 'particular' phonorecord on ReDigi, the first sale statute cannot provide a defense."[96]

But, as the previous section on reproduction rights attests, the court likely cannot—and does not even attempt to—substantiate its statement that it is impossible for a subscriber's particular digital phonorecord to be transferred to the ReDigi server. This is because the media used to send electromagnetic signals

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[91] *ReDigi*, 934 F. Supp. 2d at 649.
[92] *Id.*
[93] *Id.* at 651.
[94] 17 U.S.C. § 109.
[95] *ReDigi*, 934 F. Supp. 2d at 655 (quoting 17 U.S.C § 109(a)) (emphasis added).
[96] *Id.*

across the Internet do not transfer the sculpted grooves of vinyl records or pits of CDs, but rather transfer the electrical charge and magnetic fields that are the stored material of today's digital files. Thus, the court's conclusion that "[t]he first sale defense does not cover [transferring digital files] any more than it covered the sale of cassette recordings of vinyl records in a bygone era" is inappropriate in this context.[97]

As techniques and technology improve to more simply and efficiently transfer data, analogies to anachronistic practices become obsolete as well. A cassette recording of a vinyl record necessarily entails two phonorecords. Regardless of whether the cassette tape or vinyl record was made first, the fact that *another* phonorecord was produced implies that a *new* phonorecord was produced. Because the *new* phonorecord (i.e., the cassette recording in the court's analogy) is unlawfully reproduced, the first sale defense is inapplicable. In contrast, material objects that store digital phonorecords (e.g., electrons) are completely transferrable and thus no *new* material object need be created.[98] Once one recognizes that a *new* phonorecord is not necessarily being created, the conclusion that the first sale defense is inapplicable to ReDigi is called into question.[99]

V
POLICY CONSIDERATIONS

Despite ReDigi's lack of success in the Southern District of New York, one piece of good news for consumers is that, in the same opinion, the court declared moving digital files around one's computer for personal reasons, like defragmentation or transferring digital files from an old computer to a new computer, did not constitute an illegal reproduction of those files.[100] Unlike ReDigi's service, which "creates a new material object," the court claims that "relocating files between directories and defragmenting" (which also creates a new material object under the court's interpretation of a reproduction) are "almost

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[97] *Id.*

[98] *See infra* note 129 and accompanying text.

[99] This conclusion requires that the digital music phonorecord be transferred and, by implication, not retained by the transferor. Aaron Perzanowski and Jason Schultz advocate for a similar position but under the common law exhaustion principle on a policy basis rather than the first sale statute on physics principles. They say that if the original owner transfers his or her ownership interest in the file and the owner did not retain any copy of the file after transfer, the file should be sanctioned by the exhaustion principle. Without this policy change, the current law on copyright practically prevents the owner from alienating his or her digital music at all. Aaron Perzanowski & Jason Schultz, *Digital Exhaustion*, 58 UCLA L. REV. 889, 938 (2011).

[100] *ReDigi*, 934 F. Supp. 2d at 651 ("As Capitol has conceded, such reproduction is almost certainly protected under other doctrines or defenses, and is not relevant to the instant motion.").

certainly protected under other doctrines or defenses."[101] However, it does not state upon which legal doctrine this declaration is premised. In fact, upon further review, it is not clear whether these personal file reorganization actions would qualify as either fair use or *de minimis*, the two most germane defenses.

A. Less Law, More Feel?

> Fair use depends on
>
> (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work.[102]

For these illustrative file reorganization actions, the second and third factors certainly weigh against granting the actions a fair use defense because digital media is commercial in nature and the entire work is reproduced. Factor one is less definitive. While the actions are not for profit, they are not educational either. Nor do they qualify under any of the specifically mentioned fair use purposes of "criticism, comment, news reporting, teaching . . . scholarship, or research . . . ."[103] The otherwise helpful transformative use inquiry[104] fails to provide guidance here, since file equivalency is desired. Factor four is also less definitive, but the fact that a copyright holder's revenue would increase if consumers were required to repurchase music that moved from one directory to another, or from one computer to another, suggests that the statutory text would weigh against these actions.[105] So, even though the first and fourth factors (which tend to predict the outcome of

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[101] *Id.*

[102] 17 U.S.C. § 107.

[103] *Id.*

[104] Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 579 (1994).

[105] *See* Am. Geophysical Union v. Texaco Inc., 60 F.3d 913, 931 (2d Cir. 1994) (concluding that the fourth factor favored the copyright holder because photocopying academic articles in a commercial business decreased potential licensing and subscription revenue that the business would have had to pay when it wanted to access the articles if they had not been photocopied). Contrarily, the Court might determine that the fourth factor favors time-shifting actions by viewing these activities as "caus[ing] . . . nonminimal harm to the potential market for . . . copyrighted works." Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 456 (2012). However, this contrary position may be attributed to default bias in that there is a long-standing tradition to look past these actions instead of challenging them.

the fair use defense more than the second and third factors)[106] don't definitively weight against fair use, it is no stretch of the imagination to believe that such actions may not "almost certainly [be] protected under [fair use]."[107]

Even more fickle in outcome is the *de minimis* defense. While the court could rightfully declare that moving files between directories or while defragmenting are *de minimis* reproductions, it is not clear why moving files to the Cloud would not then also be *de minimis*. In any case, the *de minimis* defense is usually limited to minimal and insignificant copying or displaying[108], neither of which applies under these actions. The court in ReDigi may be relying more on Capitol's concession[109] than on any legal defense asserted by ReDigi, given its perfunctory dismissal of the irrational outcomes that its holding could produce for the average computer user reorganizing files.

So what is really happening here? The answer probably has more to do with a policy of common sense than it does with the law. We all, including judges and copyright holders themselves, organize digital media on our computers or transfer digital media to our new computers.[110] In both actions, one file remains accessible to the user while the original instance is forgotten. Few people would welcome the thought of an infringement lawsuit under these circumstances.

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[106] Barton Beebe, *An Empirical Study of U.S. Copyright Fair Use Opinions, 1978–2005*, 156 U. PA. L. REV. 549, 584–85 (2008) (discovering that factor four and one coincided with the outcome of the fair use defense in 83.8% and 81.5%, respectively, of the 297 opinions analyzed while factor two coincided with the outcome in only 50.2% of the opinions).

[107] *ReDigi*, 934 F. Supp. 2d at 651.

[108] *See, e.g.*, Newton v. Diamond, 388 F.3d 1189, 1196 (9th Cir. 2004) (holding that a three-note sequence from a jazz composition was a "simple, minimal, and insignificant" sampling, constituting *de minimis* use); Sandoval v. New Line Cinema Corp., 147 F.3d 215, 218 (2d Cir. 1998) (holding that copyrighted photographs shown in the movie *Seven* for 35.6 seconds was *de minimis* because the photographs were obscured, severely out of focus, and virtually unidentifiable). *But see* Ringgold v. Black Entm't Television, Inc., 126 F.3d 70, 77 (2d Cir. 1997) (holding that a copyrighted poster shown in a TV show for 26.75 seconds was not *de minimis* because the poster was clearly visible and recognizable with sufficient observable detail).

[109] The court noted that Capitol conceded defragmentation and file relocation were protected from copyright infringement. *See ReDigi*, 934 F. Supp. 2d at 651 ("As Capitol has conceded, such reproduction is almost certainly protected under other doctrines or defenses, and is not relevant to the instant motion.").

[110] As more files are stored remotely, i.e., stored in the "Cloud," moving and transferring digital media will become nearly irrelevant for individual consumers but a highly relevant legal issue for remote storage companies. Unlike individual consumers, these companies will have the bargaining power to secure these reproduction rights for themselves and for their users via contracts, avoiding uncertainties in the default copyright law rules.

The crux must be then the commercial nature of ReDigi's transactions. The court has to be worried that the copyright holder loses potential revenue that it could have earned if the different user had purchased the right to reproduce a new copy. But, since moving digital media from one location to another on one's personal computer or transferring files from an old computer to a new computer is also a reproduction, it would only seem consistent to be worried that the copyright holder is also losing potential revenue that it could have earned if the same user was required to purchase the right to reproduce a new copy when performing these personal file reorganization actions as well.

Coherently differentiating ReDigi's plight from the situations that raise no ire from the court is not an easy task. Perhaps the policy rationale that the court manifested is that, in very close calls, err on the side of the copyright holder.

B. Global Policy Divergence

If the United States is leaning one way on the digital resale issue, the European Union appears to be leaning the other way. In a factual scenario much like that in *ReDigi*, the European Union's Court of Justice (ECJ) held that a resold user license to computer software permitted the secondary market purchaser to download (read: "reproduce") computer software onto the purchaser's computer.[111] UsedSoft resold "used," unlimited period licenses to Oracle software that UsedSoft purchased from original users. The ECJ stated that the first sale of the computer software enabled the copyright holder to obtain appropriate remuneration for exhaustion of the distribution right to the computer software.[112] It acknowledged that the reproduction right was not exhausted by the first sale but noted that any reproduction necessary for the use of the computer program by a lawful user is authorized.[113] Such necessary reproduction would entail the secondary market producer to download another copy of the computer software. Moreover, the reproduction "may not be prohibited by contract."[114] However, the ECJ sensibly stated that the original user must make his or her own copy unusable at the time of resale or the original user would infringe the copyright holder's right of reproduction.[115]

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[111] Case C-128/11, UsedSoft GmbH v. Oracle Int'l Corp. (E.C.R. July 3, 2012), http://curia.europa.eu/juris/document/document.jsf?text=&docid=124564&pageIndex=0&doclang=en&mode=lst&dir=&occ=first&part=1&cid=278434.

[112] *Id.* ¶¶ 63, 89.

[113] *Id.* ¶ 85.

[114] *Id.* ¶ 76.

[115] *Id.* ¶ 78.

Although the *UsedSoft* decision was limited to computer software, it is not difficult to imagine its extension to digital media. If this occurs, there will be a divergence in how the Unites States and the European Union handle reselling digital content in the secondary market. While this could lead to different price points in the two jurisdictions, a more likely result is the proliferation of restrictive "terms of use" agreements. Since the unlimited period of the license was critical to the ECJ's judgment in *UsedSoft*, it is only a matter of time before all digital media purchases end on resell. If purchases are defined as licenses[116] rather than outright sales, they can be terminated due to certain unfavorable actions.

C. Economic Policy

The digital world seems to be moving to a license-based purgatory in order to maintain more control over copyrighted works. Licensed users are restricted from using the first sale doctrine as a defense to distributing the digital media and therefore every user is forced into licensing from the copyright owner. In theory, this seems like the optimal way to generate the most revenue. But a pre-owned digital media marketplace may actually provide a better way to free untapped revenue. First, if consumers are able to resell their digital music and obtain some resale value, they may be willing to pay more upfront. Second, consumers that in the past avoided purchasing digital music due to its inalienability may be willing to purchase instead of stream if it can be resold. Lastly, digital music cannot be resold until it is originally sold and consumed. Only when a critical mass of copies has infiltrated the market and original owners have no further use of their original copies will original sales decline because of resales. Since sales are heavily concentrated in the first few weeks[117], if not days, of release, one wouldn't be unreasonable in projecting that resales won't have as large an impact on overall sales as one might initially assume.

For example, Figure 3 shows Beyoncé's self-titled album sales tracked over approximately 16 weeks from its release date.[118] The numbers indicate that the

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[116] *See, e.g., iTunes Store – Terms and Conditions*, APPLE (Sept. 18, 2013), http://www.apple.com/legal/internet-services/itunes/us/terms.html ("The software products made available through the Mac App Store and App Store . . . are licensed, not sold, to you.").

[117] *See* Alan T. Sorensen, *Bestseller Lists and Product Variety*, 55 J. INDUS. ECON. 715, 724–25 (2007) (presenting data of 1,217 books off the *New York Times* bestseller list that indicated 73.8% hit a sales peak within their first four weeks on sale with a resulting exponential decay afterwards and noting that these sales patterns can be seen in other entertainment areas).

[118] *E.g.*, Silvio Petroluongo, *Beyonce Bound for No. 1 as Sales Soar Past 400,000*, BILLBOARD (Dec. 14, 2013, 8:28 PM), http://www.billboard.com/articles/columns/chart-beat/5839787/beyonce-bound-for-no-1-as-sales-soar-past-400000; Keith Caulfield, *'Beyonce' Sales Grow to 550k-Plus, Set for No. 1*, BILLBOARD (Dec. 15, 2013, 10:14 PM),

majority of sales took place within the first three days (basically over the weekend). Assuming that most of those original purchasers didn't get their fix of Beyoncé over the weekend, the stragglers will continue to have to purchase original versions. Determining what effect a secondary market would have on overall original purchasers would vary to a large degree on the connectedness and magnetism of the music. However, regardless of its magnetism, it instantaneously becomes more seductive to would-be stragglers who are worried about buyer's remorse because of the resale fallback opportunity. Theoretically, then, there could be more "weekend" purchasers than under the current, no resale model.

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http://www.billboard.com/articles/news/5839792/beyonce-sales-grow-to-550k-plus-set-for-no-1; *BEYONCÉ Shatters iTunes Store Records with 828,773 Albums Sold in Just Three Days*, APPLE (Dec. 16, 2013), http://www.apple.com/pr/library/2013/12/16BEYONC-Shatters-iTunes-Store-Records-With-Over-828-773-Albums-Sold-in-Just-Three-Days.html; Keith Caulfield, *Beyonce Spends Second Week at No. 1 on Billboard 200 Chart*, BILLBOARD (Dec. 26, 2013, 2:13 PM), http://www.billboard.com/articles/news/5847921/beyonce-spends-second-week-at-no-1-on-billboard-200-chart; Keith Caulfield, *Beyonce Leads for Third Week at No. 1 on Billboard 200 Chart*, BILLBOARD (Jan. 2, 2014, 12:54 PM), http://www.billboard.com/articles/news/5855135/beyonce-leads-for-third-week-at-no-1-on-billboard-200-chart; Danielle Harling, *Hip Hop Album Sales: Week Ending 3/30/2014*, HIPHOP DX (Apr. 2, 2014, 12:55 PM), http://www.hiphopdx.com/index/news/id.28149/title.hip-hop-album-sales-week-ending-3-30-2014; Andres Tardio, *Hip Hop Album Sales: Week Ending 04/06/2014*, HIPHOP DX (Apr. 9, 2014, 10:00 AM), http://www.hiphopdx.com/index/news/id.28225/title.hip-hop-album-sales-week-ending-04-06-2014. Although less established musicians may require a few weeks or months to create peak sales, those sales will still likely be made by original purchasers because the secondary supply will not meet consumer demand. In cases like these, the exponential decay will not begin immediately but instead follow the fast rise.

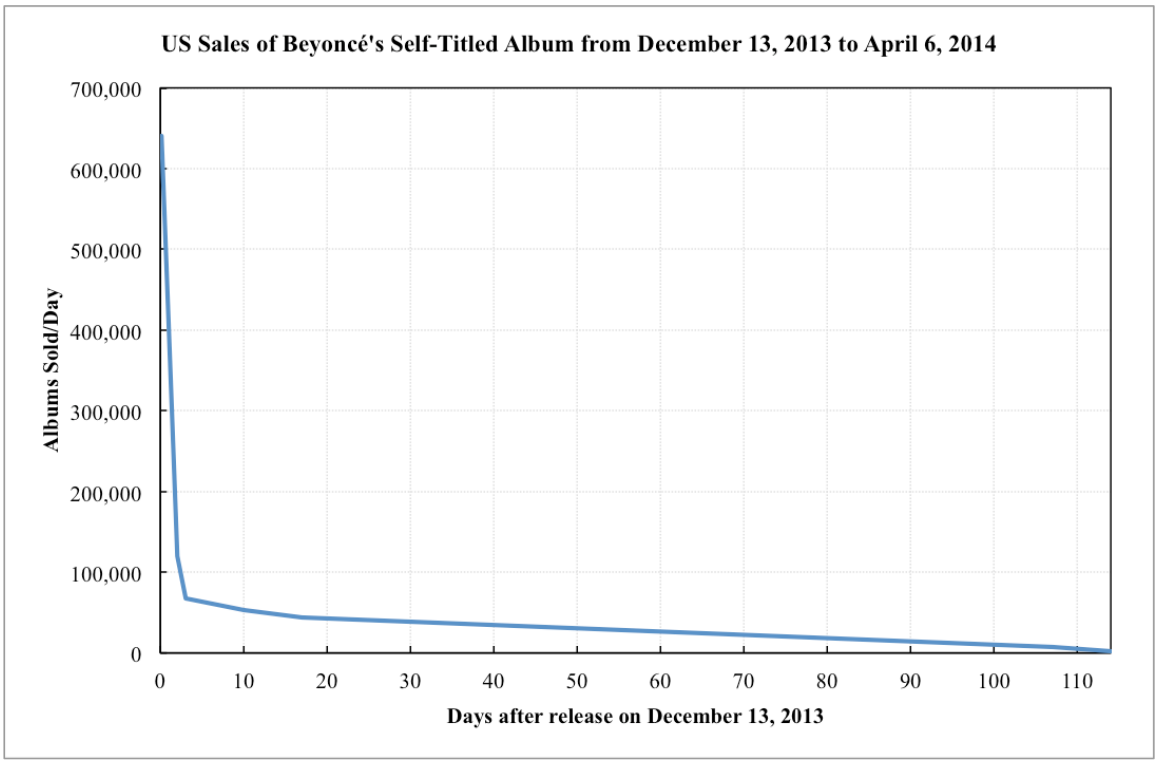

Figure 3: US Sales of Beyoncé's Self-Titled Album

There are certainly attendant economic risks associated with a secondary resale market. But as they aren't clearly irrational risks, it would be surprising if Capitol Records engaged in this sort of cost-benefit analysis before commencing litigation against *ReDigi* in an attempt to shut down the resale market. After all, the secondary market isn't a file sharing market (as used in its pejorative sense). And, as the ECJ prudently noted, reselling on the secondary market is authorized only on the condition that the original user render the original version unusable, assuring the copyright holder has seen revenue at some point from every copy in the market.[119] Much of the paper has focused on this same notion — that the original version (as a material object) is in fact made unusable because that original version (the material object itself) is transferred to the new consumer.

VI
FUTURE OUTLOOK OF PREVIOUSLY OWNED DIGITAL MEDIA

If patent activity is any indication of the future of used digital media, this will not be the last case courts confront on the issue of reproduction and

[119] *UsedSoft GmbH*, ¶ 78.

distribution of digital media. Amazon[120] and Microsoft[121] have already received patents on technology enabling secondary markets for digital media. Apple has applied for a patent[122] on its own method, and ReDigi has not given up on the business idea, filing a new patent application[123] on a system that completely avoids the unlawful reproduction issues addressed in its case against Capitol Records.

A. Possible Solutions

For those entities still looking to create a business around reselling used digital media, there are a few possible options available to continue that pursuit.

1. Legal Battle Option

The first option is to pursue the argument made above — that, contrary to the opinion of the Southern District of New York, ReDigi did not reproduce the digital media files on its servers. The advantage of resolving the complex issue this way is that it puts digital media files stored on magnetic and solid-state drives on a level playing field with digital media files stored on more physically mobile forms of storage, such as CDs, vinyl, and USB flash drives. Physical displacement of physically mobile storage devices from transferor to transferee is a well accepted means of transferring ownership without reproduction, and transferring digital media stored as electric charge and magnetic fields via electrical lines and electromagnetic waves should be a no less accepted means of transferring ownership without reproduction in the modern age of digital communication.

The disadvantage of proffering this argument is simple but paramount in practice — it is unlikely to win judicial support. While it embraces the intersection of science and law in an attempt to create a well-reasoned rule, the court, at least in the *ReDigi* case, seems ready to dismiss anything more than a cursory examination[124] of the scientific principles that guide how copyright law might be interpreted when applied to innovative, new technology.[125]

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[120] U.S. Patent No. 8,364,595 (filed May 5, 2009).

[121] U.S. Patent No. 7,818,811 (filed Dec. 6, 2005).

[122] U.S. Patent Appl. No. 13/531,280 (filed June 22, 2012).

[123] U.S. Patent Appl. No. 13/760,823 (filed Feb. 6, 2013).

[124] *See ReDigi*, 934 F. Supp. 2d at 649 (stating an ostensible maxim "confirmed by the laws of physics" that "[i]t is simply impossible [for] the same 'material object' [to be] transferred over the Internet").

[125] *See, e.g.*, 17 U.S.C. § 101 (defining a "digital transmission"); 17 U.S.C. § 117 (limiting certain exclusive rights for computer programs); Digital Millennium Copyright Act, Pub. L. No. 105–304, 112 Stat. 2860, 2873–74 (1998) (discussing limitations on liability for digital transmissions).

Furthermore, the argument laid out above that ReDigi effected only an object transfer, not creation, has several vulnerabilities. While it is true that electrons can move from point A to point B in a conductive wire, it is highly unlikely that all the electrons used to store the bits of the digital file on the ReDigi server were those used to store bits of the digital file on the subscriber's personal computer. This is because free electrons "hop" from ion to ion when traveling down a conductive wire.[126] Copper atoms, for example, that compose wires impede the movement of electrons as temperatures rise due to thermal vibrations, making it more challenging for a particular electron to reach point B as its distance from point A increases.[127] Similarly, although electromagnetic waves represent the fundamental underpinnings of wireless communication, electromagnetic waves are impeded by physical barriers and magnetic fields stray along wired communication lines and thus don't correlate exactly with the magnetic fields used to store the bits of the digital file.[128] These weaknesses only increase the resistance with which a court would meet any proposed scientific argument. Nonetheless, data stored at a subatomic scale is different from data stored on a macroscopic scale, like on paper or in a CD, precisely because subatomic particles and magnetic fields can be physically transferred, indeed are the transferring agents, along internet communication channels whereas macroscopic material objects cannot.[129] And even though an observer cannot definitively say that the same subatomic material objects originally fixing the copyrighted work were transferred to the recipient, a critic would actually fare worse because the critic would have to show how two identical particles (the original material object and accused, different, transferred material object) are actually different.[130] The boundary between material objects and the communication channels used to transport them is blurred to the point that the court can no longer rely on archaic analogies to times past when interpreting anachronistic laws.

However, even if a court were to accept the above argument, the copyright holder could still wield his distribution right to show infringement. This is because consumers who are considered licensees, as opposed to owners, with restricted transfer and use rights are unable to invoke the first sale doctrine to distribute

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[126] 1 SURINDER PAL BALI, ELECTRICAL TECHNOLOGY: ELECTRICAL FUNDAMENTALS 17–18 (2013).

[127] U. A. BAKSHI & V. U. BAKSHI, BASIC ELECTRICAL ENGINEERING 1-14 (2d ed. 2009).

[128] CURT WHITE, DATA COMMUNICATIONS AND COMPUTER NETWORKS: A BUSINESS USER'S APPROACH 78, 83, 104 (5th ed. 2009).

[129] BALI, *supra* note 126, at 17–18; WHITE, *supra* note 128, at 83.

[130] *See supra* note 89 and accompanying text.

digital media files without repercussions.[131] If the copyright holder or its authorized vendor (e.g., iTunes) licensed the use of digital media files via carefully constructed license agreements[132] (instead of selling them), a reselling licensee would still be a sitting duck for an infringement claim on the copyright holder's distribution right. Thus, any legal victory for a defendant under the reproduction right would likely be a mere consolation prize once infringement of the distribution right was adjudged.[133]

2. Technological Workaround Option

The second option is to pursue a solution outside of the legal system. Because the legal system can be slow to reverse course, using technology to work around the obstacles set up by the legal system can actually lead to faster and less costly solutions.[134] And, in fact, this is precisely what ReDigi did.[135] As discussed in ReDigi's patent application, the essence of the workaround takes the form of redirection software installed on the subscriber's computer. That software redirects downloaded packets (i.e., pieces) of the digital media file from the

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[131] Vernor v. Autodesk, Inc., 621 F.3d 1102, 1107, 1111 (9th Cir. 2010) (noting that "[t]he first sale doctrine does not apply to a person who possesses a copy of the copyrighted work without owning it, such as a licensee" and holding that a software user is a licensee rather than an owner when the copyright owner "(1) specifies that the user is granted a license; (2) significantly restricts the user's ability to transfer the software; and (3) imposes notable use restrictions").

[132] In a case similar to *Autodesk*, involving promotional CDs rather than computer software, the Ninth Circuit held that a boilerplate "promotional statement" affixed to the promotional CDs did not constitute a license agreement and therefore did not prevent transfer of ownership to the recipients. UMG Recordings, Inc. v. Augusto, 628 F.3d 1175, 1180 (9th Cir. 2011). Even though the "promotional statement" stated that the CD remained property of the record company and was only licensed to the recipient for personal use, because the promotional CDs were dispatched without prior arrangement with the recipients, the CDs were not numbered, and no attempt was made to keep track of them, the court held that no license agreement had been created. *Id.* at 1180–82.

[133] In the *ReDigi* case, ownership of the digital file was not contested. *See ReDigi*, 934 F. Supp. 2d at 645–46.

[134] Technological workarounds are frequently seen in the patent realm where the infringing party believes it easier and less costly to change software and hardware rather than pay a licensing fee. *E.g.*, *Facetime Workarounds of VirnetX Patents Bring Complaints, Costs*, MACNN (Aug. 30, 2013, 7:00 PM), http://www.macnn.com/articles/13/08/30/apple.allegedly.spending.24m.per.month.to.reroute.video.calls (stating that Apple was working on fixing problems to a workaround for a patent infringing FaceTime component, which had been costing Apple $2.4 million per month in royalty payments).

[135] Because the new technique was launched on June 11, 2012, after Capitol Records filed the complaint, it was not considered in the *ReDigi* case. *ReDigi*, 934 F. Supp. 2d at 646 n.3.

subscriber's personal computer to the subscriber's personal space on ReDigi's cloud storage servers.[136] Therefore, the subscriber's personal computer acts as another node of the Internet in which the packets simply pass through on their way to the ReDigi cloud storage server.[137] The downloaded digital file is stored for the first time on the ReDigi cloud storage server, not the subscriber's personal computer.[138] Because the file stored on the ReDigi cloud storage server is the original file downloaded from the online retailer (e.g., iTunes), there is no reproduction (and, of course, no unauthorized reproduction). Once the subscriber decides to sell the used digital content, ReDigi can simply update the owner of the allocated space occupied by the digital file on the server.[139] In other words, ReDigi can change the ownership permissions from transferor to transferee without actually moving the digital file around on its cloud storage server, thereby avoiding any further complications over unauthorized reproductions. The subscriber can still access the file by streaming its contents in a manner akin to services like Amazon Cloud Player, Google Play, and iTunes Match, whose services at this point have a favorable legal track record. This is due, in part, to similar remote television streaming services being held compliant with copyright law in the Second Circuit[140] and, in larger part, to the contractual agreements they have covering much of the music they stream.

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[136] '823 Patent Appl., *supra* note 123, ¶¶ 35-46.

[137] *Id.*

[138] *Id.*

[139] *Id.* ¶ 31.

[140] Cartoon Network LP v. CSC Holding, Inc., 536 F.3d 121, 139 (2d Cir. 2008) ("Because each RS-DVR playback transmission is made to a single subscriber using a single unique copy produced by that subscriber, we conclude that such transmissions are not performances 'to the public,' . . . ."); Am. Broad. Cos., Inc. v. Aereo, Inc., 874 F. Supp. 2d 373, 378 (S.D.N.Y. 2012), *aff'd sub nom.* WNET, Thirteen v. Aereo, Inc., 712 F.3d 676 (2d Cir. 2013) (finding that a streaming television service did not violate the copyright holder's public performance right because broadcasts captured by each user's uniquely assigned antenna were not shared with or accessible to other users). *But see* Fox Television Stations, Inc. v. FilmOn X LLC, 966 F. Supp. 2d 30, 47–48 (D.D.C. 2013) (reasoning that a streaming television service operating a unique mini-antenna for each user did infringe the plaintiff's public performance right because other devices in the transmission, like the tuner, server, router, and video encoder, were aggregated among all users in a public manner); Fox Television Stations, Inc. v. BarryDriller Content Sys., PLC, 915 F. Supp. 2d 1138, 1143–44 (C.D. Cal. 2012) (disagreeing with the Second Circuit's interpretation of 17 U.S.C. § 106(4), which grants an exclusive right "to perform the copyrighted work publicly," and coming to the conclusion that the seemingly private streams are in fact public).

While the technological workaround avoids any further liability to ReDigi from the *ReDigi* case itself, the legal ramifications of the opinion will continue to haunt future defendants in similar situations. If the court's holding remains unchallenged, it will continue to carry precedential value, potentially expanding copyright protection beyond a reasonable interpretation of the Copyright Act. ReDigi should not be expected to solely carry the burden of safeguarding the public's interest against copyright expansion, but it may be necessary to compete with bigger companies that can easily bargain their way to immunity. Nonetheless, since ReDigi does not have the bargaining power of giants like Amazon, Google, and Apple, it is also possible Capitol Records would still pursue legal action against ReDigi for infringing public performance rights until ReDigi paid for a licensing agreement.

3. Contractual Option

The first two options are really rivers that ultimately lead to the vast ocean of contractual agreements. By agreeing to a contract, both parties remove legal action from the realm of copyright infringement into the realm of contract law.[141] This eliminates a large degree of uncertainty and allows the parties to set their own terms for ownership of intellectual property without wondering how a court will interpret congressional action. The trend of relying on contracts instead of judges will only increase as these major players experiment with the secondary market for digital media.[142]

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[141] *London-Sire*, 542 F. Supp. 2d at 174.

[142] For instance, Google Music, a free streaming music service for users that have uploaded their collection to Google servers, initially launched in May 2011 without licensing agreements. Antony Bruno, *Why Record Labels and Google Music Couldn't Agree on the Cloud*, THE HOLLYWOOD REPORTER (May 12, 2011, 3:30 AM), http://www.hollywoodreporter.com/news/why-record-labels-google-music-187889; *Google Music Is Open for Business*, GOOGLE OFFICIAL BLOG (Nov. 16, 2011), http://googleblog.blogspot.com/2011/11/google-music-is-open-for-business.html. By November 2011, Google had come to terms with three major record labels, obviously concerned about possible record label backlash. Donald Melanson, *Google Partners with Universal, EMI, Sony Music, 23 Independent Labels on Google Music, Scores Exclusive Content*, ENGADGET (Nov. 16, 2011, 5:34 PM), http://www.engadget.com/2011/11/16/google-partners-with-universal-emi-sony-music-23-independent. Before that time, Apple had already secured agreements with the major record labels for their paid iTunes Match service, which allows users to stream music in their collection without actually uploading any files to Apple's servers. Aaron Gottlieb, *iCloud: The Devil Is in the Details*, MUSIC BUS J. (Aug. 2011), available at http://www.thembj.org/2011/08/icloud-the-devil-is-in-the-details. Amazon has also secured licensing agreements with the major record labels to add similar subscription-based scan and match capabilities to its Cloud Player as well. Press Release, *Updated Amazon Cloud Player Includes New Scan and Match Technology, Free Audio Quality Upgrades, and More*,

CONCLUSION

Capitol Records has two obvious concerns associated with ReDigi's business model. First, despite ReDigi's most thorough efforts, users can store files externally to their local computer in order to retain a copy for themselves prior to becoming a subscriber. Second, if users are purchasing previously owned music from other users, then they are not purchasing "new" music from providers that share profits with Capitol Records. While the first is a legitimate legal concern, it is a separate issue from whether ReDigi is committing or inducing copyright infringement, especially since ReDigi actively eliminates copies stored on the user's computer when the user sells the music. The second is a legitimate business concern but, again, separate from the issue of copyright infringement.

Technology will always be one step ahead of the glacially-moving legal system. Rather than attempt to rein in technology through legal maneuvering, copyright holders should try to incorporate it into their business models. With the uncertainty surrounding digital music transferring and copyright holders pressing the issue with almost nothing to lose, licensing agreements will continue to be sought after by both parties looking to mitigate potential loses.

Because court decisions loom large when determining which party has more leverage in contractual agreements, every court decision should be analyzed and scrutinized for flawed reasoning. These instances of flawed reasoning will be few and far between when *legal* reasoning is involved because judges have a vast amount of experience, and interpretation of the law is often subjective. However, most judges outside of the Federal Circuit have little experience with scientific reasoning, which can lead to incongruent holdings and confused parties. This is what happened in the *ReDigi* case. While ReDigi's technological acumen has allowed it to sidestep this problem for now, future entrants in the digital resale market may be less fortunate.

AMAZON.COM (July 31, 2012), http://phx.corporate-ir.net/phoenix.zhtml?c=97664&p=irol-newsArticle&ID=1720456. And, as an attempt to quell music company fears, Microsoft has even touted that its offline reselling can benefit copyright holders of pirated content because of "its ability to 'register' such content back into media that generates revenue in the ecosystem." '811 Patent, *supra* note 121, col. 16 ls. 21–22.

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ASSOCIATION FOR MOLECULAR PATHOLOGY V. MYRIAD GENETICS, INC. AND ITS IMPACT ON THE PATENTABILTY OF "DESIGNER" GENES

AMANDA H. RUSSO*

With the rapid advances in biotechnology and the widespread availability and popularity of assisted reproductive technologies, biologists may soon have the ability to manipulate human gametes and embryos in order to create children with certain desirable characteristics. Despite the fact that this scientific idea is closer to becoming a reality, the question remains whether such techniques or the altered genetic material itself are eligible for patents. After the Supreme Court's decision in Association for Molecular Pathology v. Myriad Genetics, Inc., — US. —, 133 S. Ct. 2107 (2013), the court held that isolated DNA was not the proper subject matter for patent under 35 U.S.C. § 101, while holding a patent on synthetic DNA, or "cDNA." This article argues for a narrow reading of the holding in Myriad Genetics regarding cDNA, which would limit its application to the medical uses and gene therapy.

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INTRODUCTION

Would you like blue eyes with that? In the near future, prospective parents might be able to select their children's genetic features from a drop-down menu.[1] With a heightened societal focus on perfection, it is not absurd to think parents would want to create the ideal child, nor to think it would be impossible. Advances in the biotechnology industry have increased scientists' understanding of the human genome and enhanced their ability to genetically modify eggs, sperm, and human embryos. These developments have the potential to make "designer" babies a very stark reality.

The Supreme Court's decision in *Association for Molecular Pathology v. Myriad Genetics, Inc.*[2] could be interpreted as paving the way for patenting

[1] *See, e.g.*, Dov Fox, *23andme's Designer Baby Patent*, HUFFINGTON POST (Oct. 4, 2013), http://www.huffingtonpost.com/dov-fox/23andmes-designer-baby-pa_b_4042165.html.

[2] Ass'n for Molecular Pathology v. Myriad Genetics, Inc., — U.S. —, 133 S. Ct. 2107, 2118–19 (2013) [hereinafter *Myriad Genetics*].

genetically altered genome or gamete cells. Every gene in the human body is encoded as deoxyribonucleic acid ("DNA"), and *Myriad Genetics* confronted the issue of whether a naturally occurring segment of DNA was eligible for patent.[3] The Court held that, while isolated, naturally occurring DNA was outside the realm of patent, complimentary DNA ("cDNA"), or a synthesized DNA copy, was patent-eligible.[4] However, the Court specifically concluded its opinion by noting that the "scientific alteration of the genetic code presents a different inquiry, and we express no opinion about the application of [patent eligibility] to such endeavors."[5]

If biotech scientists have the ability to manipulate the genes of an embryo or gamete cell for non-therapeutic purposes, it could be argued that these genetically modified cells are in fact patentable "inventions," given that the material was not, in that particular sequence, naturally occurring. The country has already seen movement in this area. In September 2013, the United States Patent and Trademark Office awarded a patent to 23andMe for its gamete donor selection techniques, including genetic and computer technologies.[6] These technologies allow prospective parents to select a gamete donor who would increase the likelihood that a child would be born with or without certain hereditary characteristics. With the technology, parents can choose from a variety of traits which go beyond medical conditions, enabling them to specify certain physical and psychological characteristics. It is true that the company was not attempting to patent actual sperm or egg cells, but merely facilitate a "preview" of unborn children. Most of the current technologies that closely resemble actual genetic selection focus on testing the embryo or fetus to screen for several undesirable physiological genetic characteristics. For example, pre-implantation genetic diagnosis ("PGD") has grown to be a common service at fertility clinics, allowing couples undergoing *in vitro* fertilization to test multiple embryos for genetic disorders before deciding which one to implant.[7]

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[3] *Id.* at 2111.

[4] *Id.*

[5] *Id.* at 2119–20.

[6] Fox, *supra* note 1; Terry Baynes, *Genetic-Testing Patent Raises Concerns About 'Designer Babies'*, COUNCIL FOR RESPONSIBLE GENETICS (Oct. 9, 2013), http://www.councilforresponsiblegenetics.org/blog/post/Genetic-testing-patent-raises-concerns-about-e28098designer-babiese28099.aspx.

[7] *Id.*

Recognizing this trend, Congress passed section 33 of the America Invents Act ("AIA")[8] in 2011, resulting in, among other things, a prohibition on patents for inventions "directed to or encompassing a human organisms."[9] Unfortunately, the AIA never expressly defines any of the terms in this provision, so it is not entirely clear what specific subject matter would fall under the prohibition. Moreover, in *Myriad Genetics*, the Supreme Court found that an identical provision was inapplicable in a discussion on real and synthetic human genes, noting that the "Act does not even mention genes, much less isolated DNA."[10] While one can consequently interpret *Myriad* in a way that limits the scope of the Act, it leaves open the question of the patentability of modified human gametes and embryos and the altered or synthetic gene sequencing which could potentially be encompassed within those gametes and embryos.

Patentability of inventions is governed by 35 U.S.C. § 101, which has several requirements. First, it must be of patentable subject matter — "process, machine, manufacture, or composition of matter . . . or improvement thereof."[11] Second, it must be "new" or "novel."[12] And, third, it must be "useful."[13] While no express clause excludes inventions that contravene morality from patent-eligibility, courts historically imposed a "socially beneficial" standard under the third prong of utility; in effect, this standard served as a morality condition rendering inventions with a use deemed "injurious to the well-being, good policy, or good morals of society"[14] ineligible for patent protection. Now, though, the PTO and federal courts rarely enforce this morality standard.[15] In fact, in the context of genetic material, the PTO expressly rejected the morality-based argument that "patents

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[8] Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011) (codified as amended in scattered sections of Title 35 of the U.S. Code).

[9] *Id.* § 33(a), 125 Stat. at 340.

[10] *Myriad Genetics*, 133 S. Ct. at 2118–19. Prior to the America Invents Act, Congress had banned the patenting of human embryos and organisms through annual budget appropriation acts since 2004. The Court was addressing the language found in Consolidated Appropriations Act of 2004, which is nearly identical to that in the America Invents Act. *See* Consolidated Appropriations Act of 2004, Pub. L. No. 108–199, § 634, 118 Stat. 101 (codified as amended in scattered sections of Title 35 of the U.S. Code) ("None of the funds appropriated or otherwise made available under this Act may be used to issue patents on claims directed to or encompassing a human organism.")

[11] 35 U.S.C. § 101 (2012).

[12] *Id.*

[13] *Id.*

[14] Lowell v. Lewis, 15 F. Cas. 1018, 1019 (C.C.D. Mass. 1817) (No. 8568).

[15] Laura A. Keay, *Morality's Move Within U.S. Patent Law: From Moral Utility to Subject Matter*, 40 AIPLA Q.J. 409, 429 (2012).

should not issue for [human] genes [simply] because the sequence of the human genome is at the core of what it means to be human."[16] In *Myriad Genetics*, the Supreme Court did not even consider morality-based arguments.[17] But despite the move away from a requirement of socially beneficial utility, courts have generally been reluctant to step on the toes of legislatures when they have specifically excluded a subject matter from the realm of patentability for ethical or moral concerns.[18]

With the diminished strength of the morality safeguard and huge advance in the biotech industry, *Myriad Genetics* could arguably be read in support of patents on manipulated or synthetic genes or genome sequences for use in human embryos and gametes. This Note will argue that *Myriad Genetics* should not be interpreted in such a way. Instead, *Myriad Genetics* should be read narrowly, limiting patent-eligibility of cDNA to only its uses in medical research and testing and gene therapy. Part I will explore the history of genetically altered human genes and feasibility of manipulating human embryos within the biotech industry. Part II will analyze the *Myriad Genetics* decision and its current impact on the patent-eligibility of biotech "inventions." Part III will examine court precedent within the area of gene patenting and will argue for narrow application of *Myriad Genetics* to genetically altered human gametes and embryos, specifically in light of Section 33(a) of the AIA.

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[16] Dep't of Comm., U.S. Pat. & Trademark Office, Utility Examination Guidelines, 66 Fed. Reg. 1092, 1093–94 (Jan. 5, 2001), *available at* http://www.uspto.gov/web/offices/com/sol/og/2001/week05/patutil.htm.

[17] Fox, *supra* note 1.

[18] *See, e.g.*, Diamond v. Chakrabarty, 447 U.S. 303, 317 (1980) ("[B]alancing of competing values and interests, which in our democratic system is the business of elected representatives … should be addressed to the political branches of the Government, the Congress and the Executive, and not to the courts."); Juicy Whip, Inc., v. Orange Bang, Inc., 185 F.3d 1364,1366-68 (Fed. Cir. 1999) (upholding patent on deceptive product, but noting that it would defer to Congress if it were to make the patenting of such devices illegal).

I
THE HISTORY OF ASSISTED REPRODUCTIVE TECHNOLOGIES

A. Understanding Genetics & the Future of Biotechnology

1. Basic Genetic Concepts

"We're on the cusp of having much more information, and the appearance of having much greater discretion, in choosing the traits of our children," said Thomas H. Murray, Senior Research Scholar and President Emeritus at The Hastings Center, a nonpartisan bioethics research institution.[19] Murray asked, "What use will they make of it, and should there be limits?"[20]

Before one can understand the implications of patenting genetically altered or synthetic gametes or embryos, it is useful to understand basic genetic concepts. The cells contained within an early embryo are of two types: germ cells and somatic cells.[21] The germ cells contain hereditary information and become the gametes (i.e. eggs and sperm) of a developing organism, which transmit such information.[22] Every other cell in the body is a somatic cell.[23] All of these cells contain genes, but only those in the germ cells are passed on to offspring.[24] Chromosomes are contained in the nucleus of all cells.[25] Each chromosome is made up of DNA molecules that are held together by chemically-joined nucleotides, creating a system of cross-bars[26] that support the DNA's double-helix structure.[27] The sequencing of these nucleotides within the DNA molecule creates

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[19] Tia Ghose, *Children to Order: The Ethics of "Designer Babies"*, LIVE SCIENCE (Mar. 13, 2014, 2:00 PM), http://www.livescience.com/44087-designer-babies-ethics.html.

[20] *Id.*

[21] *See* COUNCIL FOR RESPONSIBLE GENETICS, POSITION PAPER ON HUMAN GERMLINE MANIPULATION (updated Fall 2000), http://www.councilforresponsiblegenetics.org/Viewpage.aspx?pageid=101 [hereinafter POSITION PAPER].

[22] SUSANNAH BARUCH ET AL., GENETICS & PUB. POL'Y CTR, HUMAN GERMLINE GENETIC MODIFICATION: ISSUES AND OPTIONS FOR POLICYMAKERS 11 (2005), available at http://www.dnapolicy.org/images/reportpdfs/HumanGermlineGeneticMod.pdf.

[23] *Id.*

[24] POSITION PAPER, *supra* note 21.

[25] National Institutes of Health, *What is a Chromosome?*, GENETICS HOME REFERENCE (Nov. 24, 2013), http://ghr.nlm.nih.gov/handbook/basics/chromosome.

[26] *Myriad Genetics*, 133 S. Ct. at 2111.

[27] National Institutes of Health, *What is DNA?*, GENETICS HOME REFERENCE (Nov. 24, 2013), http://ghr.nlm.nih.gov/handbook/basics/dna.

the human genome[28], and determines the information available for building and maintaining an organism, serving a similar function to letters that are strung together to create words and sentences.[29] These sequences of nucleotides enable the creation of amino acids, which form the proteins in the body.[30] The nucleotides that code for amino acids are called "exons," and those that do not are called "introns."[31] For purposes of this article, it is also important to note that scientists can extract and isolate DNA molecules from cells in order to study specific sequences.[32] In addition, they can create composite DNA ("cDNA") from these molecules, which are exon-only strands of nucleotides.[33]

2. Current Reproductive Biotechnologies

A number of current reproductive technologies seem to be bringing the reality of designer children closer and closer. The successes and failures of these technologies undoubtedly provide biologists with a deeper understanding of human genetic makeup and the human body's interaction and response to scientifically manipulated genes. What follows is an introduction to some current biotechnologies that are undoubtedly accelerating scientists' ability to genetically enhance the children of tomorrow.

i. In Vitro Fertilization and Pre-Implantation Genetic Diagnosis

The increasing availability of *in vitro* fertilization unquestionably increases the potential for the specific selection of genetic characteristics to be passed on to offspring. *In vitro* fertilization ("IVF") is a method of producing an embryo *ex utero* — outside of the uterus — and the subsequent implantation of that embryo

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[28] The human genome consists of a complete collection of DNA. For more information, *see* Human Genome Project, *Human Genome: Introduction*, HUMANGENES.ORG (2014), http://humangenes.org/human-genome-introduction [hereinafter NIH, *What is DNA?*].

[29] *Id*.

[30] National Institutes of Health, *Intron Definition*, GENETICS HOME REFERENCE (Nov. 24, 2013), http://ghr.nlm.nih.gov/glossary=intron [hereinafter NIH, *Intron Definition*]; National Institutes of Health, *Exon Definition*, GENETICS HOME REFERENCE (Nov. 24, 2013), http://ghr.nlm.nih.gov/glossary=exon [hereinafter NIH, *Exon Definition*].

[31] NIH, *Intron Definition*, *supra* note 30; NIH, *Exon Definition*, *supra* note 30.

[32] *Myriad Genetics*, 133 S. Ct. at 2112.

[33] For more information on cDNA, *see* Human Genome Project, *cDNA (Complementary DNA)*, HUMANGENES.ORG (2014), http://humangenes.org/cdna-complementary-dna (last visited Dec. 1, 2014).

inside a woman's uterus.[34] At the beginning of this process, sperm and ovum are cultured and researchers calculate the optimal time for fertilization.[35] After an embryo is successfully created, the embryo is transferred into the uterus of the mother in hopes of implantation. Prior to this transfer, clinicians typically wait two to five days[36], during which time they evaluate the shape and appearance of the embryo.[37]

Another currently available technology, which complements IVF, is known as pre-implantation genetic diagnosis ("PGD").[38] This method allows scientists to test an embryo prior to implantation, in order to determine whether it carries a particular genetic disease[39], similar to a process known as gene therapy[40]. The embryos that are determined to be disease-free are those that are then implanted in the mother.[41] According to the Wall Street Journal, some United States clinics have even been using PGD to allow customers to choose the gender of their child.[42] The same method could be used with relative ease to select particular physical traits of unborn children like eye or hair color.[43] Other characteristics like intelligence or athleticism would be harder to select for using PGD, given that they are made up of several genetic factors, but seemingly not impossible[44]

Advocates claim that the use of PGD to screen embryos has the potential to eliminate complete lines of hereditary diseases, even those that have run in families

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[34] PRESIDENT'S COUNCIL ON BIOETHICS, REPRODUCTION AND RESPONSIBILITY: THE REGULATION OF NEW BIOTECHNOLOGIES 26, 30 (Mar. 2004), *available at* http://hdl.handle.net/10822/559381 [hereinafter REPRODUCTION AND RESPONSIBILITY].

[35] *Id.* at 26.

[36] Some clinicians wait until five days after fertilization (also known as the blastocyst stage) in order to maximize the probability of implantation. *Id.* at 30.

[37] *Id.*

[38] Gautam Naik, *'Designer Babies:' Patented Process Could Lead to Selection of Genes for Specific Traits*, WALL STREET J. (Oct. 3, 2013), http://online.wsj.com/articles/SB10001424052702303492504579113293429460678.

[39] *Id.*

[40] Gene therapy is a process discussed infra that is primarily focused on curing or reducing human diseases and conditions. See Kathi E. Hanna, Genetic Enhancement, NATIONAL HUMAN GENOME RESEARCH INSTITUTE (last reviewed April 2006), http://www.genome.gov/10004767.

[41] Naik, supra note 38.

[42] *Id.*

[43] *Id.*

[44] *Id.*

for generations.[45] While proponents reject the idea that PGD will lead to the possibility of designer children[46], the ability to select for or against certain genetic conditions raises the question of why that same procedure could not also be used to select for physical or psychological characteristics.

ii. Cloning

The ability of scientists to genetically clone animals and humans is another technique that significantly adds to the possibility for designer babies. Cloning is a term that refers to a number of techniques that enable the production of genetically identical organisms, and comes in three types, gene cloning, reproductive cloning, and therapeutic cloning — all of which remain controversial.[47] Gene cloning involves the isolation and copying of genes from within an organism's cells, while therapeutic and reproductive cloning entails the creation of a cloned embryo, containing genes identical to the original organism, albeit for different purposes[48]. Scientists can now use such processes to successfully clone a variety of genes and organisms, including mammal embryos.[49] In one method of cloning, scientists can take and isolate a single gene and then create a complimentary sequence of DNA, or cDNA.[50] The cDNA can then be used for study or use in a pharmaceutical setting, or, alternatively, the cloned genes could be inserted into other organisms.[51] In utilizing each of these techniques, the existing genetic code of the clone cell or organism is effectively altered to contain a genetic sequence that was not naturally occurring. Thus, such methods could theoretically be used in the genetic enhancement of human embryos.

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[45] Designer Babies: Controversy Over Embryo Selection, TELEGRAPH (Jan. 9, 2009, 9:59 AM), http://www.telegraph.co.uk/health/healthnews/4206623/Designer-babies-Controversy-over-embryo-selection.html.

[46] Id.

[47] Natonal Institutes of Health, *Cloning*, NATIONAL HUMAN GENOME RESEARCH INSTITUTE (last reviewed April 28, 2014), http://www.genome.gov/25020028 (hereinafter NIH, Cloning).

[48] *Id.*

[49] NEIL A. CAMPBELL & JANE B. REECE, BIOLOGY 375 (6th ed. 2002). *See, e.g.*, I. Wilmut et al., *Viable Offspring Derived from Fetal and Adult Mammalian Cells*, 385 NATURE 810 (1997) (discussing the cloning of genes in sheep); REPRODUCTION AND RESPONSIBILITY, *supra* note 34, at 126 (discussing the successful cloning of human embryos for embryonic stem cell lines).

[50] CAMPBELL & REECE, *supra* note 49, at 380–81.

[51] *Id.* at 377. cDNA is distinct from isolated DNA segments, in that the introns, as discussed above, are completely removed from the cDNA sequence and are not naturally occurring. *Id.* at 380–81.

Several examples serve to demonstrate the success of advances in cloning technologies in recent years. For instance, through the use of cDNA, genes from foreign organisms can be inserted into the cells of other organisms, regardless of whether it is of the same or different species.[52] In fact, it has become quite common for biologists to genetically engineer non-human organisms, including mammals, by inserting and removing genes from their genomes to create an entirely novel organism.[53] Moreover, even as far back as a decade ago, scientists had cloned hybrid human-animal embryos through the fusion of human cells with enucleated eggs from rabbits and enucleated oocytes from cows, resulting in nonhuman organisms.[54] Most significantly, South Korean researchers claimed to be the first to verify the successful cloning of human embryos in 2004.[55] They claimed to have produced 30 cloned human embryos and continued to cultivate them to the blastocyst stage.[56] The experiment allegedly resulted in the growth of the embryos to an age in which researchers could derive a pluripotent[57] embryonic human stem cell line.[58] However, in January of 2006, Science Magazine retracted the study papers produced by the South Korean researchers, after an independent investigating committee found misconduct and data fabrication.[59] Nonetheless, these obvious scientific progress in the ability to genetically alter human embryos through cloning techniques make genetic enhancement of humans all the more likely.

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[52] *Id*. at 376.

[53] JAMES D. WATSON ET AL., MOLECULAR BIOLOGY OF THE GENE 262 (5th ed. 2004).

[54] REPRODUCTION AND RESPONSIBILITY, *supra* note 34, at 125 (citations omitted).

[55] Woo S. Hwang et al., *Evidence of a Pluripotent Human Embryonic Stem Cell Line Derived from a Cloned Human Blastocyst*, SCIENCEXPRESS (Feb. 12, 2004), *available at* http://www.bedfordresearch.org/newsandlibrary/files/HuESSCNT.pdf.

[56] Reproduction and Responsibility, *supra* note 34, at 126.

[57] "Pluripotent" stem cells are those cells that have the ability to develop into nearly all cells in the body, and, so, when isolated from the embryo, these cells have the potential to produce almost all human cells. *See* Ian Murnaghan, *Pluripotent Stem Cells*, Explore Stem Cells (updated June 18, 2014), http://www.explorestemcells.co.uk/pluripotentstemcells.html.

[58] Reproduction and Responsibility, *supra* note 34, at 126 (citing Woo S. Hwang et al., *Evidence of a Pluripotent Human Embryonic Stem Cell Line Derived from a Cloned Human Blastocyst*, Sciencexpress (Feb. 12, 2004), *available at* http://www.bedfordresearch.org /newsandlibrary/files/HuESSCNT.pdf).

[59] Donald Kennedy, Editorial Retraction, Science Mag. (Jan. 20, 2006), http://www.sciencemag.org/content/311/5759/335.2.short.

iii. Somatic and Germ-line Gene Modification

In addition to the abovementioned, biotechnological advances have made it possible to modify the chromosomes of both human and animal cells through the insertion of new DNA segments into the existing chromosome.[60] Such techniques are referred to as somatic or germ-line genetic modifications. If changes are performed on specialized or differentiated body tissue — cells like liver, muscle, or blood cells — it is referred to as somatic cell gene modification, which affects only the individual whose DNA is modified.[61] On the other hand, if the insertion is performed on eggs or sperm cells prior to fertilization or in an embryo in its early stages where its cells are undifferentiated, it is called germ-line genetic modification.[62] With germ-line modification, the effects of the altered genes go beyond the individual organism on which the insertion was originally performed.[63] Given that DNA is incorporated into the embryo's germ cells, those genes will be passed on to future generations.[64]

Scientists have performed genetic modification of both somatic and germ-line cells in animals in order to examine the resulting impact of this alteration. Somatic gene modifications have in fact been performed on humans dating back to 1990, which have targeted cells in attempts to correct an existing disease or condition in that individual.[65] But experiments with genetic modification on laboratory animals like mice indicate that germ-line modification might be technically easier than somatic.[66] This might be because early embryonic cells are more accepting of foreign DNA and more readily synthesize corresponding proteins than most somatic cells.[67] In one experiment successfully utilizing the germ-line technique, researchers inserted into fertilized mouse eggs a gene that promoted the synthesis of growth hormone.[68] As a result, the developing mice produced unusually high levels of the growth hormone and, ultimately, grew to two times their normal size.[69] Given the results of animal studies and the

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[60] Position Paper, *supra* note 21.

[61] *See* Francis Fukuyama, Our Posthuman Future: Consequences of the Biotechnology Revolution 76 (2002).

[62] *Id.* at 77.

[63] Position Paper, *supra* note 21.

[64] BARUCH, *supra* note 22, at 11–20.

[65] POSITION PAPER, *supra* note 21.

[66] *Id.*

[67] *Id.*

[68] *Id.*

[69] *Id.*

increasing access and availability of IVF, "there appear to be no technical obstacles to initiating germ-line modification experiments in humans"[70] in order to achieve genetic enhancements.

There are a number of well-established, existing methods for germ-line gene modification that have been used in animal studies for several years.[71] Three such methods include (1) the introduction of a gene by direct pronuclear microinjection of DNA segments ("PMI"), the most frequently used method, (2) the use of a virus to carry the gene of interest to infect a target cell by delivering that gene, and (3), in recent years, a process where sperm is used as a vector to deliver the genes.[72] The first method, PMI, has actually been used to inject entire *artificial* chromosomes.[73] So, theoretically at least, the existing germ-line modification techniques could be used for genetic enhancement purposes in humans.[74]

However, the current methods for germ-line genetic modification have not yet been established "sufficiently reliable or safe to countenance their immediate use with humans"[75] and are not without issue. Both the viral and non-viral mechanisms for genetic modification pose issues with precise placement and expression of the modified genes.[76] The insertion of foreign genes into imprecise locations within a chromosome, either via direct injection or virus, may have unpredictable consequences. This is demonstrated by one experiment in which the offspring of a mouse injected with an extra copy of a gene were 40 times more likely to develop cancer than the control group of mice.[77] In another experiment, insertion of a gene substantially interfered with naturally occurring genes in mouse embryos, which resulted in mice with several physical deformities.[78] These results indicate that the techniques currently used for germ-line modifications can lead to

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[70] *Id.*

[71] *Id.*

[72] *Id.*

[73] For a more comprehensive reading of these processes, *see* Kevin R. Smith, Sarah Chan, & John Harris, *Human Germline Genetic Modification: Scientific and Bioethical Perspectives*, 43 ARCHIVES OF MEDICAL RESEARCH 491, 493–96 (2012), *available at* http://www.arcmedres.com/article/S0188-4409(12)00244-5/pdf.

[74] *Id.*

[75] *Id.*

[76] BARUCH, *supra* note 22, at 14–15.

[77] Aya Leder et al., *Consequences of Widespread Deregulation of the c-myc Gene in Transgenic Mice: Multiple Neoplasms & Normal Development*, 45 CELL 485 (1986).

[78] A.J. Griffith et al.,. *Optic, Olfactory, and Vestibular Dysmorphogenesis in the Homozygous Mouse Insertional Mutant Tg9257*, 19 J. CRANIOFAC. GENET. DEV. BIOL. 157–63 (1999).

developmental disruptions in the modified embryo itself.[79] Unsuccessful attempts at germ-line genetic modification in animals indicate that such a technique on humans "can profoundly perturb ordinary biological function and introduce new, harmful genetic variants into the gene pool[.]"[80]

The aforementioned problems are primarily associated with gene *addition*[81]. But various techniques to introduce genetically modified DNA into gametes are continuously developing. For example, researchers are now able to insert a gene into a particular location on a chromosome, while simultaneously removing the unwanted gene — i.e. gene *replacement*.[82] While the Council for Responsible Genetics suggested that such a technique would increase accuracy of genetic modification, it also noted that this would not entirely eliminate the risk of the procedure.[83] One of these risks includes the lack of ability on the part of biologists to fully understand or predict the potential interactions of genes with one another within the environment of a specific individual.[84] Certain genetic combinations could prove harmful to the individual and, subsequently, to future offspring.[85] The risks associated with such harmful combinations would apply equally to germ-line genetic modification in the contexts of alleviating disorders and enhancing certain characteristics.[86]

In 2009, Japanese researchers successfully performed germ-line genetic modification in mammals when they produced the first genetically modified primates with the ability to pass the modified gene down to their offspring.[87] Researchers modified a virus to carry a gene known as green fluorescent protein ("GFP") found in jellyfish.[88] This virus was used to infect and transfer this gene to

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[79] POSITION PAPER, *supra* note 21.

[80] *Id.*

[81] To be clear, gene addition is the insertion of an *extra* copy of a malfunctioning or nonfunctioning gene. *See Gene Addition*, BIOCHEMISTRY, http://www.biochem.arizona.edu/classes/bioc461/Biochem499/RaymondCostantini/Pages/GeneAddition.htm (last visited Dec. 1, 2014).

[82] POSITION PAPER, *supra* note 21.

[83] *Id.*

[84] *Id.*

[85] *Id.*

[86] *Id.*

[87] Rob Stein, *Test Monkeys' Offspring Pick Up Genetic Modification*, WASH. POST, May 28, 2009, at A1 (detailing the first successful germ-line modification of a primate and hypothesizing that "[t]he approach could tempt some to use the technique to try to engineer desirable traits in people").

[88] *Id.*

the cells of several marmosets.[89] The jellyfish gene, which causes the cells to glow green when exposed to ultraviolet light, was present in four out of five offspring resulting from the implantation of marmoset embryos in female marmosets.[90] Researchers could identify the success of this genetic modification due to the fact that the marmosets actually glowed green when exposed to ultraviolet light.[91] Then, the researchers took gamete cells from two of the marmosets that carried the gene and, from them, were ultimately able to produce four offspring — three of which contained the jellyfish gene and glowed under ultraviolet light.[92] The success of this germ-line genetic modification of primates suggests the high likelihood that the same technique would be similarly effective on humans.

Ultimately, biologists and medical researchers may be able to draw on the scientific successes of somatic genetic modification in humans and the somatic and germ-line modification in animal cells to achieve successful germ-line modification in humans.[93] This would allow for genetic enhancement of humans, in addition to gene therapy — a distinction highly relevant to the following discussion. Gene *therapy* primarily focuses on curing or reducing human diseases and conditions, while genetic *enhancement* focuses instead on enhancing human characteristics.[94] Given the potential development and use of biotechnologies like human germ-line genetic modification ("HGGM"), it is necessary to address the legal implications posed by such technologies to the United States patent system.

II
THE SUPREME COURTS DECISION IN ASSOCIATION FOR MOLECULAR PATHOLOGY V. MYRIAD GENETICS, INC.

A. Procedural Posture of Myriad Genetics

After several years of research, Myriad Genetics, Inc. ("Myriad"), a molecular diagnostic testing and assessment company, obtained a number of patents based on the discovery of two human genes, mutations of which correlate with an increased risk of breast and ovarian cancer.[95] Specifically, the Patent and

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[89] *Id.*
[90] *Id.*
[91] *Id.*
[92] *Id.*
[93] BARUCH, *supra* note 22, at 13.
[94] Hanna, *supra* note 40.
[95] Ass'n for Molecular Pathology v. USPTO, 653 F.3d 1329, 1339 (Fed. Cir. 2011); *Myriad Genetics*, 133 S. Ct. at 2111. It is significant to note that there are several citations to this case in its various procedural postures.

Trademark Office specifically granted patents for the isolated BRCA1 and BRCA2 genes.[96] The patents essentially gave Myriad the exclusive right to isolate these genes from an individual's genome and also to synthetically create BRCA cDNA.[97] Given that isolation is necessary to conduct genetic testing, the patents effectively gave Myriad exclusive control of BRCA testing.[98]

The patents, however, did not stop others like the University of Pennsylvania's Genetic Diagnostic Laboratory ("GDL") from providing genetic testing services to women.[99] In fact, Dr. Harry Ostrer, former researcher at New York University School of Medicine, frequently sent DNA samples to GDL to be tested.[100] When Myriad learned that others were offering these services, it began to assert its rights over the isolated genes, claiming all genetic testing infringed upon its patents.[101] Myriad filed suit against various entities providing the BRCA testing and the litigation and threats thereof prevented several other medical practitioners and entities from providing BRCA testing.[102] Consequently, Myriad Genetics was left as the sole entity that could provide or license the service.[103]

Several years later, Dr. Ostrer, along with health care professionals, advocacy groups, and patients filed suit against Myriad Genetics seeking invalidation of their patents under § 101 in the United States District Court for the Southern District of New York.[104] The plaintiffs asserted that Myriad's claims cover patent-ineligible subject matter.[105] They alleged that the patenting of the BRCA genes impeded research on breast cancer, and restricts the "ease of access to genomic discoveries" and the dissemination of knowledge to patients.[106]

Approximately ten months after plaintiffs had filed their complaint, the District Court granted summary judgment in their favor, invalidating all of Myriad's claims to the isolated BRCA genes and testing methods.[107] Policy

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[96] *See Ass'n for Molecular Pathology*, 653 F.3d at 1339.
[97] *Myriad Genetics*, 133 S. Ct. at 2113–14.
[98] *Id.* at 2113.
[99] *Id.* at 2114.
[100] *Id.*
[101] *Id.*
[102] *Ass'n for Molecular Pathology*, 653 F.3d at 1340.
[103] *Myriad Genetics*, 133 S. Ct. at 2114.
[104] *Id.*
[105] Complaint at 3, Ass'n for Molecular Pathology v. USPTO, 669 F. Supp. 2d 365 (S.D.N.Y. 2009) (No. 09 Civ. 4515).
[106] *Id.* at 2 –4.
[107] Ass'n for Molecular Pathology v. USPTO, 702 F. Supp. 2d 181, 238 (S.D.N.Y. 2010).

considerations, namely, what plaintiffs alleged to be the diminished availability of the testing for breast cancer, played into the court's consideration of the motion for summary judgment, but, ultimately, it decided that the issues were too complicated to address at that stage.[108]

On appeal to the Federal Circuit, the court affirmed the judgment of the lower court invalidating Myriad's method patents for comparison and analysis of DNA sequences, given that they covered abstract steps and were, thus, a subject matter ineligible for patent.[109] The court went on to reverse the district court's invalidation of the isolated DNA molecules on the grounds that the "the molecules as claimed do not exist in nature."[110] As a result, the patents on the isolated BRCA1 and BRCA2 genes were upheld.[111]

The Federal Circuit judges in this case each wrote separate opinions, in which each judge addressed their own perspective and concerns. Judge Alan D. Lourie wrote the opinion for the court, finding that the composition claims were in fact patentable and noting that the "isolated DNAs, not just cDNAs, have a markedly different chemical structure compared to native DNAs."[112] In her concurrence, Judge Kimberly A. Moore discussed the moral implications that the patents raised.[113] However, she declined to address the moral and ethical issues, noting that the job of the court is to interpret the words of the legislature, an inquiry, she suggests, which "[has no] moral, ethical, or theological components."[114]

In a separate opinion, Judge William C. Bryson concurred and dissented in part from the court's decision.[115] He disagreed with the court's holding that the isolated genes were a patent-eligible subject matter.[116] Judge Bryson explained that, given the established product of nature exception, the isolated genes were

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[108] *Id*. at 211.

[109] *Ass'n for Molecular Pathology*, 653 F.3d at 1334.

[110] *Id*. at 1334.

[111] *Id*. at 1365 ("[T]he mere fact that the larger chromosomal polymer includes the same sequence of nucleotides as the smaller isolated DNA is not enough to make it per se a law of nature and remove it from the scope of patentable subject matter.").

[112] *Id.* at 1353.

[113] *Id.* at 1371–73 (Moore, J., concurring in part).

[114] *Id.* at 1373 (discussing the notion *Chakrabarty* that these types of policy considerations are within the province of the legislature).

[115] *Id*. (Fed. Cir. 2011) (Bryson, J., concurring in part and dissenting in part).

[116] *Id.*

merely naturally occurring material and ineligible for patent.[117] He also suggested that a decision to the contrary "would likely have broad consequences, such as preempting methods for whole-genome sequencing . . . ."[118]

In 2012, the case was granted certiorari by the Supreme Court. However, the Court vacated the judgment and remanded to the Federal Circuit in light of the Court's holding in *Mayo Collaborative Services v. Prometheus Labs*.[119] In *Mayo*, the Court was confronted with patent claims for methods of determining effective dosages of autoimmune disease medications in treating patients.[120] Ultimately, the court invalidated the patent. In its opinion, the Court significantly relied on the public policy rationale that innovations restricting the ability to research and develop natural laws should not be eligible for patent.[121] The Court seemed to be expanding the "naturally occurring" exception through its application of the law of nature doctrine to a *non-natural* process. Justice Breyer discussed the Court's refusal to "uphold[] patents that claim processes that too broadly preempt the use of a natural law."[122] Allowing these patents would "disproportionately t[ie] up the use of the underlying natural laws, inhibiting their use in the making of further discoveries."[123]

On remand, the Federal Circuit again upheld patents. The same three-judge panel reached the same legal conclusions, again allowing the isolated DNA patents given their nonexistence in nature.[124] Judge Lourie, again, delivered the opinion of the court. While indicating the concern that these patents "raise substantial moral and ethical issues related to awarding a property right to isolated portions of human DNA," Judge Moore indicated that these are issues that are more properly within

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[117] *Id.* at 1377–78 (citing Diamond v. Chakrabarty, 447 U.S. 303 (1980)).

[118] *Id.* at 1373 (Bryson, J., concurring in part and dissenting in part).

[119] Ass'n for Molecular Pathology v. Myriad Genetics, 132 S. Ct. 1794 (2012).

[120] Mayo Collaborative Servs. v. Prometheus Labs., 132 S. Ct. 1289 (2012). Prometheus was the exclusive licensee of a patent that's claims were directed to a method of determining dosages of drug to give to patients with particular autoimmune diseases. Effectiveness of dosages inherently varies with each patient given their unique metabolization rates. Having identified a threshold dosage for effectiveness, which was part of the claimed method, the plaintiffs argued that they could more efficiently determine whether to increase or decrease the dosage of the drug for individual patients. *Id.*

[121] *Id.*

[122] *Id.* at 1294 (citing O'Reilly v. Morse, 56 U.S. (15 How.) 62, 112–20 (1854)); *see also* Gottschalk v. Benson, 409 U.S. 63, 71–72 (1972).

[123] *Mayo*, 132 S. Ct. at 1294.

[124] Ass'n for Molecular Pathology v. USPTO, 689 F.3d 1303, 1337 (Fed. Cir. 2012).

the realm of Congress.[125] In a dissenting opinion, Judge Bryson reiterated his belief that the isolated DNA genes were not a patentable subject matter and allowing such patents would "likely have broad consequences."[126]

B. The Supreme Court's Decision

The Supreme Court once again granted certiorari in order to determine the validity of Myriad's patents on the isolated BRCA genes and cDNA. The primary issue before the Court was whether naturally occurring, but isolated DNA sequences were eligible for a patent under 35 U.S.C. § 101.[127] The Court also addressed the issue of whether synthetically created DNA, or cDNA was patent eligible.[128] Ultimately, the Court affirmed and reversed in part the Federal Circuit's opinion, holding that "a naturally occurring DNA segment is a product of nature and not patent eligible merely because it has been isolated, but that cDNA is patent eligible because it is not naturally occurring."[129]

Given that Myriad neither created or altered the genetic structure of DNA nucleotides, the Court did not decide whether creation or alteration would lead to unpatentability.[130] Instead, it was first confronted with the question of whether the discovery of the precise location and the isolation of the DNA genes renders them patentable.[131]

In reaching its conclusion, the Court relied on *Diamond v. Chakrabarty*, in which a patent for a modified bacterium was in dispute.[132] In that case, scientists had added four plasmids to the bacterium allowing it to break down crude oil.[133] The Court explained that, prior to this patent claim, this was not a naturally occurring composition of matter, but rather a "product of human ingenuity having a distinctive name, character [and] use."[134] In *Myriad Genetics*, the Court noted that the bacterium at issue in *Chakrabarty* had "markedly different characteristics

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[125] *Id.* at 1346 (Moore, J., concurring in part).

[126] *Id.* at 1348 (Bryson, J., concurring in part and dissenting in part).

[127] *Id.*

[128] *Id.* Note that the cDNA created by Myriad "contain[ed] the same protein-coding information found in a segment of natural DNA but omit[ted] portions within the DNA segment that do not code for proteins." *Id.*

[129] *Id.*

[130] *Id.* at 2116, 2120 ("Scientific alteration of the genetic code presents a different inquiry, and we express no opinion about the application of § 101 to such endeavors.").

[131] *Id.* at 2116.

[132] *Chakrabarty*, 447 U.S. at 305.

[133] *Id.*

[134] *Id.* at 309–10 (internal quotation marks omitted).

from any found in nature," given its distinct chemical composition and its newfound ability to break down oil.[135] This was in stark contrast to Myriad's mere isolation of genes from its surrounding material.[136]

Justice Thomas went on to discuss *Funk Brothers Seed Co. v. Kalo Inoculant Co.*[137], where the Court considered a patent for a resultant mixture of naturally occurring bacteria.[138] The mixture of bacteria was created as a way of improving the nitrogen intake of leguminous plants and was ultimately a more effective inoculant[139], given that other inoculants often mutually inhibited each other.[140] The Court nonetheless held that the mixture was not proper subject matter under § 101, finding that there had been no alteration to the bacteria.[141]

In *Myriad Genetics*, there was no alteration to the chemical composition of the genetic material, nor was there any change in the material as a result of isolation.[142] The Court stated that it was not enough that Myriad's isolation of DNA entailed the severance of the covalent bonds — holding the nucleotides of the DNA molecule in place — and effectively created a non-naturally occurring molecule.[143] The claims themselves simply focused on the genetic information contained in the isolated genetic sequence.

The Court then moved on to a discussion of cDNA, recognizing that the synthetic DNA did not pose the same legal challenges as the isolated DNA segments.[144] The cDNA that Myriad claimed was a sequence resulting in only the inclusion of exons, as opposed to naturally occurring sequences which include both exons and introns. While acknowledging that nature dictated the structure of the nucleotide sequence, the Court found that resulting cDNA was an

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[135] *Myriad Genetics*, 133 S. Ct. at 2217 (citing and quoting *Chakrabarty*, 447 U.S. at 310).

[136] *Id*. at 2117.

[137] Funk Bros. Seed Co. v. Kalo Inoculant Co., 333 U.S. 127 (1948).

[138] *Id*.

[139] Inoculants are soil additives that serve to promote plant health when included in the surrounding soil or on the roots of the plant itself. *See generally id.*

[140] *Id*. at 129–30.

[141] *Id*. at 132 ("There is no way in which we could call [the bacteria mixture a product of invention] unless we borrowed invention from the discovery of the natural principle itself.").

[142] *Myriad Genetics*, 133 S. Ct. at 2118.

[143] *Id*. To be clear, the genes are only non-naturally occurring in the sense that this particular genetic sequence is not found *isolated* in nature.

[144] *Id*. at 2119

"unquestionabl[e] creat[ion] of something new," since it was "distinct from the DNA from which it was derived."[145]

Myriad Genetics, in conjunction with *Chakrabarty*, could be read to suggest that the act of creating or altering of naturally occurring material are significant in determining patentability.[146] However, it seems that the Court is only willing to uphold a patent when claims deal with the creation or alteration of the essential nature of the original material, effectively crewating a "markedly different" material.

III
THE APPLICATION OF MYRIAD GENETICS TO GENETICALLY MODIFIED OR SYNTHETIC GAMETES AND EMBRYOS

As has been discussed, in the last three decades, biotechnology has been advancing at such a rate to make human genetic enhancement an actual reality.[147] For years, scientists have had the ability to screen developing human embryos for chromosomal abnormalities and genetic disorders.[148] It is not in the unforeseen future that parents will be able to hand-select the genes that their children will encompass. Developments in assisted reproduction technologies have led to the creation of new markets for things like gametes and embryos.[149] These new markets raise significant questions in patent law, regarding ownership and rights surrounding human genes, embryos, gametes, and the like.[150] The Supreme Court made clear the unavailability of patents on isolated human genes in *Myriad Genetics*, but a question remains as to patentability of the creation of synthetic DNA or the alteration of naturally occurring DNA in the context of genetic enhancement of human gametes and embryos. This section will address how this subject matter should be addressed in light of the Court's holding in *Myriad Genetics*.

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[145] *Id.*

[146] *See, e.g.*, *Myriad Genetics*, 133 S. Ct. at 2117 (contrasting the patent claims at issue in *Myriad* to those in *Chakrabarty* and finding that, unlike in *Chakrabarty*, "Myriad did not *create* anything" (emphasis added)); *Chakrabarty*, 447 U.S. at 310 (upholding patent on modified bacteria given the resulting bacterium's "markedly different" properties and abilities).

[147] POSITION PAPER, *supra* note 21. Genetic engineering procedures are conducted on animals, and these procedures have resulted in mice growing to twice their size and cows producing milk enhanced with pharmaceuticals. This testing may ultimately result in athletically gifted children, the physically attractive, or a math genius. *See id.*

[148] *See generally* REPRODUCTION AND RESPONSIBILITY, *supra* note 34, 89–104.

[149] *Id.* at 147.

[150] *Id.*

A. The Emergence of Human Genes as a Topic in Patent Law

Over the past several decades, the growing industry of biotechnology has left us with many questions about what can and cannot be afforded patent protection. While 35 U.S.C. § 101 defines patentable subject matter as "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof," one of the provisions of the America Invents Act, passed by Congress in 2011, specifically prohibits the issuance of patents for inventions "direct to or encompassing human organisms."[151] This provision consequently puts a spotlight on many reproductive biotechnologies, including genetic modification techniques.

Until *Myriad Genetics*, courts had not addressed the issue of whether genetic material was a patent-eligible subject matter under § 101. Despite this fact, the first patents on human genes were issued by the PTO in the early 1980s.[152] By the time of the Supreme Court's decision, there were an estimated 2,645 issued patents claiming "isolated DNA."[153] By 2005, the PTO had issued close to 40,000 DNA-related patents that, in total, covered about twenty percent of the genes in the human genome.[154]

In the past, patents have been issued on modified human tissue, cell lines, and even DNA molecules of human origin.[155] It was not until recently, however, that patents for genetically modified gametes or embryos appeared to be on the horizon. In 2013, a personal-genomics company called 23andMe was issued a patent on a system of reproductive technology[156] for a process in which fertility clinic patients could identify certain characteristics that they would like their child to have.[157] Based on donors' and patients' genetic profiles, the program then runs an inheritance calculation, which can identify the preferred donors for the recipient. The patient can select for a child with a low risk of certain genetic conditions, or even request that the child have a high probability of a certain eye color.[158] Significantly, the issuance of this patent indicates a move in patent law towards the protection of genetic enhancement techniques and processes.

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[151] Leahy-Smith America Invents Act, § 33(a).

[152] *See* Eric J. Rogers, *Can You Patent Genes? Yes and No*, 93 J. PAT. & TRADEMARK OFF. SOC'Y 19, 28 (2011).

[153] *Ass'n for Molecular Pathology*, 689 F.3d at 1333.

[154] Rogers, *supra* note 152, at 19.

[155] REPRODUCTION AND RESPONSIBILITY, *supra* note 34.

[156] Naik, *supra* note 38.

[157] *Id.*

[158] *Id.*

According to Jacob Sherkow, formerly a biotechnology patent expert at Stanford University's law school and now an Associate Professor of Law at New York Law School, said that 23andMe's patent "is a shot across the bow — a signal to the world that this is what the future is going to look like."[159]

B. Judicial Precedent on the Patentability of Living Organisms

Existing case law in this area does not seem to produce a coherent rule of law with respect to patent eligibility of living organisms. It first began when the Supreme Court in *Diamond v. Chakrabarty* upheld a patent on a living bacterium organism.[160] In *Chakrabarty*, the Court determined that the scientific alteration of a bacterium sufficiently transformed it into a new chemical composition with new capabilities of breaking down crude oil.[161]

Since *Chakrabarty* was decided, patents have been issued on several human-made organisms, including multicellular organisms[162] and genetically altered mammals.[163] Nonetheless, the Supreme Court has continued to reiterate the limitations on the subject matter that is eligible for patent. Prior to *Myriad Genetics*, the Court in *Mayo* had previously concluded that "simply appending conventional steps, specified at a high level of generality, to laws of nature, natural phenomena, and abstract ideas cannot make those laws, phenomena, and ideas patentable."[164] In *Myriad Genetics*, the Court explained that it has "long held that [§ 101 of the Patent Act] contains an important "implicit exception" that "[l]aws of nature, natural phenomena, and abstract ideas are not patentable."[165]

But in discussing this "rule against the patents on naturally occurring things," it noted that a balancing test limits the extent of this prohibition; that is, "a delicate balance between creating 'incentives that lead to creation, invention, and discovery' and 'imped[ing] the flow of information that might permit, indeed spur,

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[159] *Id.*

[160] *Chakrabarty*, 447 U.S. 303; *see also* Keay, *supra* note 15, at 421–30.

[161] *Chakrabarty*, 447 U.S. at 309–10.

[162] *See In re* Allen, No. 87-1393, 1988 WL 23321 (Fed. Cir. Mar. 14, 1988) (upholding a patent on a new type of oyster).

[163] *See* U.S. Patent No. 4,736,866 (filed June 22, 1984) (issued Apr. 12, 1988).

[164] *Mayo*, 132 S. Ct. at 1300.

[165] *Myriad Genetics*, 133 S. Ct. at 2116 (citing Mayo Collaborative Servs. v. Prometheus Labs., — U.S. —, 132 S. Ct. 1289, 1293 (2012)). In stating the rule against patents on naturally occurring things, the Court in *Mayo* noted "[s]uch discoveries are 'manifestations of . . . nature, free to all men and reserved exclusively to none.'" *Mayo*, 132 S. Ct. at 1293 (quoting *Chakrabarty*, 447 U.S. at 309).

invention.'"[166] This was the standard governing the court's decision on the whether what Myriad had claimed was a proper subject matter for patent.[167]

To be clear, there are two separate holdings in *Myriad Genetics*. First, the Court held that an isolated, naturally occurring DNA segment is a product of nature and, as such, not eligible for patent.[168] Second, the Court fond that cDNA, or the lab created DNA, is eligible for patent, given that "it is not naturally occurring."[169] When looking closely at the holding in *Myriad Genetics*, the Court specifically identifying an exception to certain uses of natural phenomenon.[170] Consequently, "only an *innovative* or *inventive* use of a natural phenomenon" may be patentable.[171] The Court's opinion implicitly suggests that the *alteration* or *creation* of the information in the human genes or other material would a significant factor in determining whether the subject matter is "naturally occurring."[172] Given that Myriad neither altered or created the BRCA genes, and that its primary contribution was discovering the location and identifying the sequencing of the genes within particular chromosomes, the court found it patent-ineligible.[173] Simply "separating that gene from its surrounding genetic material is not an act of invention."[174]

Depending on the future technology involved in creating desirable genetic sequences with hand selected characteristics, there could be one of two legal possibilities for an application for patent protection. Should the biotechnology industry produce a technique for isolating particular genetic human traits, perhaps taken from embryonic stem cells, then it would seem to necessarily follow that the these isolated genes would nonetheless be naturally occurring and constitute a non-patentable subject matter. However, a new question arises should these isolated genes be used to create a synthetic genetic sequence that alters or replaces an existing sequence and is not naturally occurring.

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[166] *Myriad Genetics*, 133 S. Ct. at 2116 (quoting *Mayo*, 132 S. Ct. at 1305).

[167] *Id.*

[168] *Id.* at 2111.

[169] *Id.*

[170] *Myriad Genetics*, 133 S. Ct. at 2119 ("Had Myriad created an innovative method of manipulating genes while searching for the BRCA1 and BRCA2 genes, it could possibly have sought a method patent.").

[171] Ariosa Diagnostics, Inc. v. Sequenom, Inc., No. C 11-06391 SI, 2013 WL 5863022, at *9 (N.D. Cal. Oct. 30, 2013) (quoting *Myriad Genetics*, 133 S. Ct. at 2119).

[172] *Id.* at 2115–16.

[173] *Id.* at 2116.

[174] *Id.* at 2117.

C. The Demise of the "Beneficial Utility" Requirement and the Introduction of the America Invents Act

For patent eligibility, the innovation or invention must be (i) novel, (ii) nonobvious, (iii) useful.[175] Under the utility requirement, "beneficial utility" used to play a significant role.[176] Dating back to 1817, Justice Story recognized this doctrine in *Lowell v. Lewis*, where he stated the view that "the law requires . . . the invention should not be frivolous or injurious to the well-being, good policy, or sound morals of society."[177]

While previously a consideration under the utility prong, the Court by the mid-1990's no longer seemed interested in assessing the morality of inventions in patent law.[178] Since *Lowell*, federal courts have relaxed, if not dismissed, this additional requirement of beneficial utility. For example, the Federal Circuit in *Juicy Whip, Inc., v. Orange Bang, Inc.*, evaluated a case in which a patented product was misleading to customers as to the source of the product it was producing.[179] Nonetheless, the court stated that a doctrine invalidating patents serving immoral or illegal purposes "has not been applied broadly in recent years."[180] It also suggested that the legislature is free to prohibit patents on such deceptive devices but has not yet done so.[181] The Supreme Court conveyed a similar idea in *Chakrabarty*, when it noted that the Court was "without competence to entertain [arguments regarding the balancing of risks and benefits of inventions] . . . the contentions [before the Court] should be addressed to the political branches of Government . . . ."[182]

Despite the current broad interpretation of the bounds of patentable subject matter rejecting a beneficial utility doctrine, morality cannot be entirely dismissed from a discussion of patents on human gametes and embryos. As implied by the first Federal Circuit opinion in *Myriad Genetics*, one of the primary functions of the judiciary is to interpret federal statutory law and regulations governing the

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[175] 35 U.S.C. § 101.

[176] *See generally* ROBERT P. MERGES & JOHN F. DUFFY, PATENT LAW AND POLICY: CASES AND MATERIALS 216–28 (3d ed. 2002) (describing the history behind the doctrine of beneficial utility of the doctrine).

[177] *Lowell*, 15 F. Cas. at 1019.

[178] Keay, *supra* note 15, at 429.

[179] *Juicy Whip*, 185 F.3d at 1366–67.

[180] *Id.*

[181] *Id.* at 1368.

[182] *Chakrabarty*, 447 U.S. at 317.

realm of patent.[183] The Federal Circuit went on to suggest the inappropriateness of courts to intervene in policy decisions that are more adequately addressed by the legislature.[184] This indicates a key distinction between *Myriad Genetics* and any future case involving the patent – eligibility of human gametes or embryos. The distinction is one based on Congress's express recognition of the ethical and moral concerns regarding patent claims "directed to or encompassing human organisms" through the adoption of a federal statute excluding such subject matter from the realm of patentability.[185] The fact that Congress has spoken with regard to the patentability of this sort of subject matter should portend courts' adherence to this preference.[186]

1. The America Invents Act's Prohibition on Patents for Inventions "Directed to or Encompassing Human Organisms."

While the issuance of patents can potentially serve the significant purpose of encouraging innovation and the research and development of beneficial advances in the industry of biotechnology, patents on human gametes and embryos clearly raise a number of ethical concerns, which are expressly recognized by federal statute.[187] Prior to *Myriad Genetics*, Congress directly addressed the issue of patenting human organisms through the America Invents Act. Section 33(a) of the Act states, in relevant part, that "[n]otwithstanding any other provision of law, no patent may issue on a claim directed to or encompassing a human organism."[188]

It is significant that *Myriad Genetics* was not a case in which the court was confronted with the §33(a) of the America Invents Act discussed *supra*. To this extent, the holding should be properly narrowed to synthetic DNA which *does not* implicate this federal statute — e.g. medical uses and gene therapy, and not those materials that are so intimately related to human organisms and their creation and development. The statue itself makes no distinction between naturally occurring or

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[183] *Ass'n for Molecular Pathology*, 653 F.3d at 1353.

[184] *Id.* ("[T]he Supreme Court has 'more than once cautioned that courts should not read into the patent laws limitations and conditions which the legislature has not expressed'" (quoting Bilski v. Kappos, 561 U.S. 593, 602 (2010)).

[185] Leahy-Smith America Invents Act, § 33(a).

[186] *See Chakrabarty*, 447 U.S. at 317 ("[T]he balancing of competing values and interests, which in our democratic system is the business of elected representatives . . . should be addressed to the political branches of the Government, the Congress and the Executive, and not to the courts."); *Juicy Whip*, 185 F.3d at 1366–68 (upholding patent on deceptive product, but noting that it would defer to Congress if it were to make the patenting of such devices illegal).

[187] Leahy-Smith America Invents Act, § 33(a).

[188] *Id.*

synthetic materials in its prohibition on patents "directed to or encompassing human organisms."[189]

Significantly, § 33(a) may serve to limit the extent of the impact that *Myriad Genetics* will have on the analysis on the patentability of modified gametes and embryos. The Court will be confronted with a case necessarily involving statutory construction, something that was *not* involved in *Myriad Genetics*. When this issue arises, undoubtedly much of the debate will surround the precise meaning of the phrases "directed to" and "human organism."[190] Unfortunately, the Act itself does nothing to precisely define either of these phrases, and its legislative history seems "riddled with internal contradictions, ad hoc exceptions, and, generally, a lack of any coherent guiding principle."[191] It is important to note that the phrase "human organism" seems to have been intended to have the same meaning as it did under the Weldon Amendment — off of which § 33 was modeled.[192] The Weldon Amendment was originally put forward by U.S. Representative Dave Weldon and passed as a part of the Consolidated Appropriations Act of 2004, which barred appropriated federal funds from their use in issuing patents "directed to or encompassing a human organism"[193] The legislative history of this amendment offers some guidance to the meaning of this prohibition in both the Appropriations Act and § 33:

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[189] *Id.*

[190] *See* Dennis Crouch, *Patents Directed to Human Organisms*, PATENTLYO (Sept. 9, 2011), http://www.patentlyo.com/patent/2011/09/patents-directed-to-human-organisms.html ("The phrase 'directed to' is not defined in the Patent Act or the USPTO Implementation Rules found at 37 C.F.R. § 1, *et seq.* However, the phrase [is] often used by patent attorneys to describe the coverage of a particular claim and the statutory category. Even amongst patent attorneys, the usage is not uniform.").

[191] Yaniv Heled, *On Patenting Human Organisms or How the Abortion Wars Feed into the Ownership Fallacy*, 36 CARDOZO L. REV. 241, 243–44 (2014).

[192] *Id.* at 261, n.86 ("The sponsors of Section 33 viewed the Section as mere codification of the Weldon Amendment and, as such, as a direct extension of the Weldon Amendment's jurisprudence, including the meaning of the term 'human organism.'"); *see* 157 Cong. Rec. E1177, E1177-78 ("Chairman Lamar Smith [included] in the manager's amendment to . . . the America Invents Act, a provision that will codify an existing pro-life policy rider included in the CJS Appropriations bill since FY2004. This amendment, commonly known as the Weldon amendment, ensures the U.S. Patent and Trade Office, USPTO, does not issue patents that are directed to or encompassing a human organism . . . . I also submit into the Record items from previous debate on the Weldon amendment that will add further clarification to the intent of this important provision.").

[193] Consolidated Appropriations Act of 2004, Pub. L. No. 108-199, § 634, 118 Stat. 3 (2004).

> [T]he U.S. Patent Office has already issued patents on genes, stems cells, animals with human genes, and a host of non-biologic products used by humans, but it has not issued patents on claims directed to human organisms, including human embryos and fetuses. My amendment would not affect the former, but would simply affirm the latter.[194]

The history of the Weldon Amendment helps delineate Congress's intended meaning of the statute. The congressional record further reveals that "the amendment applies to patents on claims directed to or encompassing a human organism at *any stage* of development, including a human embryo . . . *regardless* of whether the organism was produced by technological methods (including, but not limited to, *in vitro* fertilization, somatic cell nuclear transfer, or parthenogenesis)."[195] It, admittedly, goes on to note that the amendment should not preclude "*methods* for creating, modifying, or treating human organisms, including . . . through *in vitro* fertilization, methods of somatic cell nuclear transfer, medical or genetic therapies, methods for enhancing fertility, and methods for implanting embryos."[196]

Nevertheless, given the text of the act and what legislative history is clear, it seems obvious that human embryos would not constitute a patentable subject matter under 35 U.C.S. § 101. Pursuant to the America Invents Act, no patents shall issue to inventions "directed to or encompassing a human organism."[197] Genetically engineered or altered human embryos are the epitome of what the America Invents Act sought to keep beyond the realm of patent. While no definition is provided for this phrase, a human embryo, including those genetically altered or synthetically created, contains all of the elements necessary for human life to form and develop and would undoubtedly "encompass a human organism."

It is less obvious, given the lack of clear guidance in interpreting this phrase, that gametes would fall into this category. But, within the Manual of Patenting

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[194] 157 CONG. REC. E1177-04 (testimony of Representative Dave Weldon previously presented in connection with the Consolidated Appropriations Act of 2004, Pub. L. 108-199, § 634, 118 Stat. 3, 101 (2004), and later resubmitted with regard to the America Invents Act; *see* 149 Cong. Rec. E2417-01).

[195] 157 Cong. Rec. E1177-04, E1180 (daily ed. June 23, 2011) (emphasis added) (statement of Rep. Dave Weldon).

[196] 157 Cong. Rec. E1182, E1183 (daily ed. June 23, 2011) (emphasis added) (statement of Rep. Lamar Smith).

[197] Leahy-Smith America Invents Act § 33(a); see also MPEP § 2105 (8th ed. Rev. 8, July 2010).

Examining Procedures, the PTO has indicated that a rejection will be made on the basis of non-statutory subject matter "[i]f the broadest reasonable interpretation of the claimed invention as a whole encompasses a human organism[.]"[198] Given that gametes contain at least half of the genetic material that goes into the formation of a human embryo, it seems consistent that genetically altered or synthetic gametes, like embryos would "encompass[] a human organism" — thus, considered a non-patentable subject matter. At the very least, genetically altered gametes would be "directed to" a human organism. These cells are the building blocks of human life. Sperm and egg combine together to form an embryo, which has the potential to develop into a living, functioning human being. Consequently, even if they are genetically modified through germ-line modification or another technique, they do not lose their inherent capability of producing human life. Moreover, to the extent that scientists may create synthetic genetic material in order to alter gamete cells,[199] the gamete itself would still be ineligible for patent, and, arguably, so to would the synthetic genetic material itself.

Researchers and scientists may attempt to skirt this prohibition by receiving a patent on the process of modifying human gametes or embryos given the Weldon amendment's "methods" exception.[200] However, a patent application of this sort would nevertheless include claims *directed to* a human organism for the reasons described above. Furthermore, the excepted methods that are enumerated only encompass assisted reproductive technologies, somatic cell nuclear transfers, and genetic therapies.[201] While the legislative history does not provide an exhaustive list of exceptions, methods for genetic *enhancement* — distinct from genetic therapy — are not included and do not appear to have been contemplated.[202] The techniques and processes involved in altering gametes or embryos to achieve desired characteristics would be directly aimed at creating genetically *enhanced* human organisms; methods that are not explicitly protected in the legislative history.

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[198] MPEP § 2105 (8th ed. Rev. 8, July 2010).

[199] It does not seem scientifically impossible to synthetically create the desirable DNA characteristics and use those to modify existing human gametes and genes. *See Myriad Genetics*, 133 S. Ct. at 2112–13 (discussing the discussed the possibility of creating synthetic DNA through well-known scientific processes).

[200] 157 Cong. Rec. E1182, E1183 (daily ed. June 23, 2011).

[201] *Id.* (excepting methods including "in vitro fertilization, methods of somatic cell nuclear transfer, medical or genetic therapies, methods for enhancing fertility, and methods for implanting embryos").

[202] *Id.*

Admittedly, it is questionable whether legislative history will or should bear any weight in statutory construction. However, under the above formulations it would suggest that gametes and embryos would both be considered within the realm of human organisms, since it arguably encompasses organisms at *any stage* of development. Moreover, the methods for genetic enhancement techniques are distinct from medical or genetic therapy processes involving the creation of embryos, and is not expressly excluded from the realm of patentability.

It is significant to reiterate the distinction between genetic modification characterized as gene *therapy* and genetic *enhancement*. [203] What has been termed gene therapy is primarily focused on curing or reducing human diseases and conditions, where as genetic enhancement focuses in stead on enhancing human characteristics.[204] In analyzing the legislative history of the Weldon Amendment, it does not expressly exclude genetic enhancement from patent law's prohibition on claims "directed to or encompassing human organisms" but does address genetic *therapy*.[205] Accordingly, to properly adhere to legislative intentions, federal courts should view the impact of *Myriad Genetics* as limited in determining whether human gametes or embryos are patentable, either synthetic or natural. That is, when the patents at issue implicate § 33(a), *Myriad Genetics* should apply only in the limited context of the patentability of *medical* processes or genetic *therapies*,[206] and not in contexts of genetic *enhancement*.

For example, patents on synthetic DNA similar to that in *Myriad Genetics*, but used in germ-line genetic modifications or reproductive cloning might implicate the federal statute. As gametes have the ability to pass along hereditary genetic information from one organism to its offspring[207], any synthetic gene or DNA that is inserted into a gamete is essential to the ultimate function of that gamete or embryo. In other words, without the incorporated synthetic DNA, a modified gamete would not be able to ensure perpetuation of its genetic information. In this way, it would seem a claim for such synthetic genes or DNA sequences, like those that could be utilized in germ-line genetic modification, might well be an invention "directed to or encompassing a human organism," and, accordingly, prohibited by statute.[208]

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[203] *See* Hanna, *supra* note 40.
[204] *Id.*
[205] 157 Cong. Rec. E1182, E1183 (daily ed. June 23, 2011) (emphasis added).
[206] *Id.*
[207] BARUCH, *supra* note 22, at 11.
[208] Leahy-Smith America Invents Act § 33(a).

It is important to note that *Myriad Genetics* was considering a sort of gene therapy, where the location and isolation of the BRCA genes enabled testing for and treatment of certain health conditions within the human body; the Court was not considering genetic enhancement. But, in upholding the patents on Myriad's claims for cDNA, the Court's holding only specifically applied to cDNA, which did not encompass a human organism. These are synthetic materials that are entirely created and inserted by the scientists.[209] The synthetic DNA involved in *Myriad Genetics* was designed to to diagnose and target conditions *within* a human organism, but, admittedly, does not itself *encompass* one. However, gametes and embryos for all of the aforementioned reasons are fundamentally distinct from the type of material that Myriad was creating and should be treated as such in subsequent federal court cases involving such genetic material.

CONCLUSION

In sum, the advances of biotechnology and reproductive technologies invite the question of the patentability of human gametes and embryos. The challenges this question poses to patent law seems even more imminent given the Supreme Court's holding in *Myriad Genetics*. However, pursuant to the MPEP and the America Invents Act, no innovation or invention "directed to or encompassing a human organism"[210] will be considered for a U.S. patent, and the holding in *Myriad Genetics* does nothing to disturb this prohibition. While the phrase directed to is never precisely defined or used in any other section of the Act, the plain meaning of the phrases and legislative history may help to inform the analysis in federal courts. Ultimately, the Supreme Court's holding upholding patents on cDNA should be limited in its reach and should not apply in circumstances that are in direct contradiction to federal law — namely, section 33's express prohibition on patents "directed to or encompassing human organisms."[211]

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[209] The Supreme Court discussed the possibility of creating synthetic DNA through well-known scientific processes. "It is also possible to create DNA synthetically through processes similarly well known in the field of genetics. One such method begins with an mRNA molecule and uses the natural bonding properties of nucleotides to create a new, synthetic DNA molecule. The result is the inverse of the mRNA's inverse image of the original DNA, with one important distinction: Because the natural creation of mRNA involves splicing that removes introns, the synthetic DNA created from mRNA also contains only the exon sequences. This synthetic DNA created in the laboratory from mRNA is known as complementary DNA (cDNA)." *Myriad Genetics*, 133 S. Ct. at 2112.

[210] Leahy-Smith America Invents Act, § 33(a).

[211] *Id.*

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MEDIA LAW AND COPYRIGHT IMPLICATIONS OF AUTOMATED JOURNALISM

LIN WEEKS*

New computer algorithms are capable of taking data-heavy input, such as stock prices, and outputting paragraphs of prose that read like traditional journalism stories. Such programs have recently been adopted by top media outlets, including Bloomberg and the Associated Press, for generating stories in some contexts. Given that such technology is a departure from traditional print media reporting, it is unclear whether its implications are adequately addressed by standing jurisprudence in the realms of mass media and copyright law. In general, those areas of law for which courts have developed strong abstract or conceptual frameworks are more easily applied to new technologies.

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INTRODUCTION

The following paragraphs appeared in a story on Forbes.com on May 22, 2014:

> Workday is expected to book a wider loss than a year ago when it reports first-quarter earnings on Tuesday, May 27, 2014. Analysts are expecting a loss of 28 cents per share, down from a loss of 20 cents per share a year ago.
>
> The consensus estimate is down from three months ago when it was a loss of 26 cents, but is unchanged over the past month. For the fiscal year, analysts are projecting a loss of $1.15 per share. Revenue is projected to be 66% above the year-earlier total of $91.6 million at

> $152.4 million for the quarter. For the year, revenue is expected to come in at $735.4 million.[1]

In a critique of the write-up, one might note a lack of conclusions about the information presented. This could be intentional: Forbes may believe investors should draw their own conclusions from the simple, informational story. From a stylistic standpoint, the prose is choppy, but technically sound; it is unclear whether the writer has spoken to the "analysts" referenced in the story or just noted their opinions online or in print. A more perceptive reader might notice the striking similarity to another story published an hour later on the same day:

> Aeropostale is expected to book a wider loss than a year ago when it reports first-quarter earnings on Thursday, May 22, 2014. Analysts are expecting a loss of 72 cents per share, down from a loss of 16 cents per share a year ago.
>
> The consensus estimate remains unchanged over the past month, but it has decreased from three months ago when it was a loss of 17 cents. For the fiscal year, analysts are expecting a loss of $1.75 per share. A year after being $452.3 million, analysts expect revenue to fall 9% year-over-year to $409.9 million for the quarter. For the year, revenue is projected to come in at $1.94 billion.[2]

Now what looked like curt but useful prose looks like formulaic, if not lazy, writing. Questions of self-plagiarism arise; it appears that the article is written from a template. A close examination reveals that the phrasing of the second paragraph of each piece is slightly different, and that the syntax of the second and third sentences of that paragraph is flipped in a similar fashion. At the very least, one could feel reasonably comfortable in the assumption that the two articles were either authored by the same person, or that the latter piece was written by a person free to take liberties with the first writer's work. But neither article was written by a person at all; both are the product of a computer program.

New software allows computer programs to translate data-heavy content, such as box scores, stock prices, housing starts, and weather reports, into prose that

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[1] Narrative Science, *Loss Expected to Widen for Workday*, FORBES (May 22, 2014, 9:00 AM), http://www.forbes.com/sites/narrativescience/2014/05/22/loss-expected-to-widen-for-workday.

[2] Narrative Science, *Loss Expected to Widen for Aeropostale*, FORBES (May 22, 2014, 10:00 AM), http://www.forbes.com/sites/narrativescience/2014/05/21/loss-expected-to-widen-for-aeropostale.

reads much like traditional news stories. In the above example, Forbes used software produced by a company called Narrative Science to automatically generate blog posts for its website. These articles are generated and derived from information about the stock market,[3] but they include statistic-driven vocabulary that refers directly to the opinions of analysts. Other ventures into automated journalism are ongoing — the Knight Lab at Northwestern University is "working at advancing news media innovation through exploration, experimentation" in the digital realm.[4]

The new technology has several interesting legal implications, specifically in the realms of copyright and media law. Part I of this note further introduces the technology underlying automated journalism, and explores its development, usage, and business applications. Part II examines both the traditional mass media law and copyright-related problems created by the usage of automated journalism programs, including problems affecting input, output, and the algorithm itself. These could include bad input or programming that leads to a falsehood in an automated story and potentially exposes the publisher to liability for defamation. In another scenario, competition between media entities might lead to copyright disputes over the algorithms or output of automated journalism stories.

A theme is present throughout the note: Computer-generated journalism is just one type of information that will be disseminated with increasing frequency as similar technologies are adapted to various ends. The popularity of algorithmic reporting will require courts to more fully and definitively articulate a set of first principles for free speech lest they work case-by-case or see a fractal splintering of decisions in the lower courts. One effect of the relative clarity of copyright's theoretical underpinnings, in comparison with the more open questions surrounding the First Amendment, will be a more straightforward translation of existing jurisprudence to the new questions presented by automated journalism technology.

I
INTRODUCTION TO THE TECHNOLOGY

The weather report and a listing of stock prices and changes were once pillars of major American newspapers. The practice was rooted in tradition, but it was also deeply practical — people care about things that affect their lives. The

[3] Narrative Science, *About*, FORBES, http://blogs.forbes.com/narrativescience/profile (July 10, 2014).

[4] *About Us*, KNIGHT LAB, http://knightlab.northwestern.edu/about (last visited July 10, 2014).

stock market is a proxy for retirement savings; the weather may affect commutes and plans for the day. Those two sections are low-level journalism, easy to investigate and simple to report. But the newspaper is far from the only way to get such information.

Consider the stock ticker and the digital thermometer. Each takes a raw data input and processes it into output that humans can quickly and intuitively understand. News consumers take for granted the accuracy of this output, despite the lack of human moderation in the form of fact checkers or editors standing by to ensure the accuracy of a temperature or stock price. Similar output occur at stoplights, when GPS systems give directions, and even through Artificial Intelligence bots capable of sustaining a facsimile of conversation through a chat program.

Returning to journalism, what happens when computers are enabled to provide information on topics like the weather and financial sector? More interestingly, what happens when computers are asked to tackle topics more complex than a simple report of a temperature or price? Traditional print news reporting is a highly developed field, with many conventions that have been developed to serve readers. But what if computers could be taught to "write" reports on multi-faceted subjects much the same way humans do? This technology is being developed and, in some instances, already being used.

A. Definitions and Terminology

This note will use the term "automated journalism" to refer to the process by which computer algorithms turn data-rich input into prose that reads like a traditional write-up. "Algorithm" is a general term that refers broadly to the category of computer programs that transform input into different sets of output. Input will be at times referred to as "data" or "clean data," terminology that allows a distinction between the numbers and information that go into a story and the spreadsheet formatting itself. "Output," "reports," and "stories" are used interchangeably throughout.

B. Database Journalism

In a way, automated journalism is one of the most logical outgrowths of database journalism, although the two may seem at odds. Data journalism is a subversion of the normal prose structure of news stories, which was catalyzed by the realization that some of what traditional journalists do is better stored as

numbers in a spreadsheet rather than in prose form.[5] For instance, if a journalist were to track down every phone call made during a certain time period from certain state offices through public records requests, society might benefit more from the production of an organized spreadsheet identifying caller, recipient, time of day, etc. rather than a simple repurposing of that data into one story and one interpretation. Of course, data journalism still leaves room for the reporter to write his story — the point is simply that by making the clean data available for mining by others, perhaps more patterns or narratives will emerge.

Automated journalism operates on a different part of the process, by attempting to use the systems inherent in data journalism to identify the most relevant story. It also thrives on the exploitation of large data-rich caches of information already available in several areas of public interest.[6] In some cases, the information needs to be organized or cleaned up. In other cases, it is already in usable form. But the upshot is that automated journalism programs are a systematic, rather than human-driven, way of turning data collections into a format most news consumers are comfortable with: a prose translation of the underlying information into words, sentences, paragraphs, and articles.

C. The Business of Automated Journalism

Narrative Science, one example of the practicing leaders in the field, was buoyed when the *New York Times* published an article in September 2011 introducing the technology to a large cross section of the public.[7] This led to a bout of coverage in mass-media publications with headlines such as "This Article Was Not Written By a Computer,"[8] "Can the Computers at Narrative Science Replace

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[5] *See, e.g.*, Nate Silver, *What the Fox Knows*, FIVETHIRTYEIGHT (Mar. 17, 2014, 5:38 AM), http://fivethirtyeight.com/features/what-the-fox-knows/ ("Data journalists, meanwhile, can organize information by running descriptive statistics on it, by placing it into a relational database or by building a data visualization from it.").

[6] *See, e.g.*, Michael Sallah, Debbie Cenziper & Steven Rich, *Left With Nothing*, WASHINGTON POST (Sept. 8, 2013), http://www.washingtonpost.com/sf/investigative/2013/09/08/left-with-nothing/ (investigation into property tax liens placed on homeowners in the District of Columbia).

[7] Steve Lohr, *In Case You Wondered, a Real Human Wrote This Column*, NEW YORK TIMES (Sept. 10, 2011), http://www.nytimes.com/2011/09/11/business/computer-generated-articles-are-gaining-traction.html?pagewanted=all&_r=0.

[8] Rachel Arndt, *This Article Was Not Written By a Computer*, FAST COMPANY (Nov. 8, 2011, 5:37 PM), http://www.fastcoexist.com/1678779/this-article-was-not-written-by-a-computer.

Paid Writers,"[9] and, perhaps most optimistically, "Can an Algorithm Write a Better News Story than a Human Reporter?"[10] Reports have indicated that the company raised $6 million and $11.5 million in two highly publicized rounds of venture capital funding.[11]

To understand the value investors see in Narrative Science, and to understand the legal implications, it is instructive to break down in general terms how the program creates a story. For an individual client, such as a media outlet — although, uses for the technology have been imagined in the medical, financial, and tech industries, as well as a host of others — the company tailors an algorithm to its needs, based on the expected output. For instance, the vocabulary utilized in the output story is tweaked:[12] The outcome of a baseball game and a football game are both dependent on the number of points scored by each of two competing teams, but any human reader would blanch at a description of a 21-7 contest that stated that the Packers beat the Vikings by 14 runs. Specializations also exist for various fields; the algorithm that interprets housing starts is different from one that deals with polling numbers. But in every case, the key is data-rich input. Automated journalism software is adept at interpreting a large set of data, be that barometric pressure over time or TV ratings, running that data through an algorithm, and releasing a story about that data using traditional grammar, vocabulary, and syntax.

The business implications of such technology are deep and still developing. Bloomberg, Forbes, and the Big 10 Network all have some form of automated journalism integrated into their regular news output.[13] In June of 2014, the Associated Press announced that it would soon follow suit.[14] Though it remains to be seen whether the lowered cost and increased speed of reporting such technology provides can compensate for the lack of human voice and interpretation, it is likely

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[9] Joe Fassler, *Can the Computers at Narrative Science Replace Paid Writers?*, THE ATLANTIC (Apr. 12, 2012, 8:03 AM), http://www.theatlantic.com/entertainment/archive/2012/04/can-the-computers-at-narrative-science-replace-paid-writers/255631.

[10] Steven Levy, *Can an Algorithm Write a Better News Story Than a Human Reporter?*, WIRED (Apr. 24, 2012, 4:46 PM), http://www.wired.com/2012/04/can-an-algorithm-write-a-better-news-story-than-a-human-reporter/?utm_source=twitter&.

[11] John Pletz, *Narrative Science Gets $11.5 Million to Write Next Chapter*, CRAIN'S CHICAGO BUSINESS (Sept. 10, 2013), http://www.chicagobusiness.com/article/20130910/BLOGS11/130919987/narrative-science-gets-11-5-million-to-write-next-chapter.

[12] Lohr, *supra* note 7 ("The data also determines vocabulary selection. A lopsided score may well be termed a 'rout' rather than a 'win.' ").

[13] Lohr, *supra* note 7.

[14] Paul Colford, *A Leap Forward in Quarterly Earnings Stories*, ASSOCIATED PRESS (June 30, 2014), http://blog.ap.org/2014/06/30/a-leap-forward-in-quarterly-earnings-stories.

— inevitable, in fact — that future uses of this technology will not be confined to journalism, however broadly defined. Other such uses are outside the scope of this note, which is confined to automated journalism "reporting," while focusing specifically on the mass media implications of such work.

II
AUTOMATED JOURNALISM AND THE FIRST AMENDMENT

A. A Three-Dimensional Problem: Theories of Protection, Manner of Restraint, Type of Output

Does algorithmic output fall within the realm of speech protected by the First Amendment? Courts have only begun to flesh out the answer to this question in the multitude of circumstances in which it might arise. But the normative answer likely depends on one's preferred theory of First Amendment protection as well as the type of protection being contemplated. Once an abstract framework is in place for these concepts, it becomes easier to make sense of ramifications for the various points along the potential spectrum of machine-generated output.

As a category, algorithmic output may be considered more or less valuable — that is, more or less worth protecting — depending on the lens through which one views the First Amendment. The four traditional justifications for the protection of free speech[15] may lead proponents to different baseline calibrations for evaluation.

Adherents to the theory of the "marketplace of ideas," following Justice Holmes' famous articulation that "the best test of truth is the power of the thought to get itself accepted in the competition of the market,"[16] may welcome any new voice, human or otherwise. Likewise, as long as programmers stand behind it, those that see individual self-fulfillment as the main function of speech might appreciate algorithmic output as such.[17] Proponents of the self-governance theory

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[15] Namely, "the need to protect the truth-seeking function of the marketplace of ideas; the facilitation of democratic self-actualization; the pragmatic value of providing a social safety valve; and the safeguarding of individual liberty or autonomy." Steven G. Gey, *The First Amendment and the Dissemination of Socially Worthless Untruths*, 36 FLA. ST. U. L. REV. 1, 6 (2008); *see also* Thomas I. Emerson, *Toward A General Theory of the First Amendment*, 72 YALE L.J. 877, 902 (1963).

[16] Abrams v. United States, 250 U.S. 616, 630 (1919) (Holmes, J., dissenting).

[17] Or maybe not — as Emerson construes the self-fulfillment theory,

> Man is distinguished from other animals principally by the qualities of his mind. He has powers to reason and to feel in ways that are unique in degree if not in kind. He has the capacity to think in abstract terms, to use language, to communicate his thoughts and

would probably view machine speech more skeptically, as the role of algorithmic output in achieving Justice Brandeis' construction of the goal of the state ("to make men free to develop their faculties; and that in its government the deliberative forces should prevail over the arbitrary")[18] certainly depends on how you define "deliberative." And there would seem to be almost no room for algorithmic output as speech for those who envision free speech's main social benefit as providing a forum for potentially dangerous actors to let off steam in a manner less harmful than engaging in physical action.[19]

The application of media and copyright law to automated journalism raises several important First Amendment questions within this framework. In the media law realm, the Supreme Court's recent decision in *Brown v. Entertainment Merchants Association* sounds in the area of content-based governmental restriction, but some of the most interesting as-yet unanswered questions arise in tort. For instance, when will false information disseminated by an algorithm be considered defamation?

The First Amendment questions surrounding copyright law go the other direction. When does Congress's goal of "promot[ing] 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"[20] supersede the free usage of those creations? The first-principles formulation of copyright law is more well settled than that of free speech — the moral rights doctrine having been basically rejected in favor of a pecuniary rights regime (excepting the limited protection of VARA)[21] — but open questions still exist as to authorship.

> emotions, to build a culture. He has powers of imagination, insight and feeling. It is through development of these powers that man finds his meaning and his place in the world.

Thomas I. Emerson, *Toward A General Theory of the First Amendment*, 72 YALE L.J. 877, 879 (1963).

[18] Whitney v. California, 274 U.S. 357, 375 (1927) (Brandeis, J., concurring), *overruled by* Brandenburg v. Ohio, 395 U.S. 444 (1969).

[19] This may be a function of journalism, rather than of automated journalism, however. *See* John J. Watkins Charles, Gertz *and the Common Law of Defamation: Of Fault, Nonmedia Defendants, and Conditional Privileges*, 15 TEX. TECH L. REV. 823, 850 (1984) ("[A]s Professor Nimmer has noted, the self-fulfillment and safety valve aspects of the first amendment have little relevance to the press.").

[20] U.S. CONST. art. I, § 8, cl. 8.

[21] Visual Artists Rights Act, 17 U.S.C. § 106A, 1990; *See* Carter v. Helmsley-Spear, Inc., 861 F. Supp. 303, 313 (S.D.N.Y. 1994) ("In passing VARA, Congress for the first time provided for protection of artists' "moral rights" under the Copyright Act.").

The theoretical lines are familiar, but technology has presented a new palette with which to color. Courts and scholars have discussed the spectrum of possible algorithmic output. This discussion warrants a brief overview, as it helps contextualize the specific type of output that is this note's focus. From a positive standpoint, it is clear that in some cases the product of an algorithm or software program triggers the same protections as a piece of political writing produced by traditional means.[22] However, it is equally clear that in other cases it does not. For example, no one argues that the "opinion" expressed by an automatic door that opens in response to motion, nor a sign on subway platforms indicating when the next train will arrive should receive special protection of any sort.

Indeed, these examples are definitively outside protection. Much output produced by computer algorithms does not meet the threshold of the "ideas" and "social messages" that the Court considers sufficient for First Amendment purposes. For illustration, in a set of debating articles published in the *University of Pennsylvania Law Review* in 2013, Stuart Minor Benjamin and Tim Wu both concede that there are plenty of permutations of "speech" produced by a machine, computer or algorithm that neither receive nor deserve constitutional treatment, regardless of where the line is drawn for First Amendment protection.[23] In his article, Wu notes the importance of such line drawing stating, "Too little protection would disservice speakers who have evolved beyond the printed pamphlet. Too much protection would threaten to constitutionalize many areas of commerce and private concern without promoting the values of the First Amendment."[24]

The articles conceive of "machine speech" as a category, on one end of which lie videogames, on the other, automatic doors, car alarms, and the like. Wu, Benjamin and other scholars have dived eagerly into borderline cases. Arguments have been made for and against the speech value of GPS directions, search engine results, and Facebook "likes."[25] Necessarily, such discussions revolve around multiple axes. For instance, Wu distinguishes "speech" from "communication," investigates questions of personhood, and further explores the traditional exclusions and inclusions that the Supreme Court has defined for the category of speech — explicit exclusions including incitement, false statements of fact,

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[22] Brown v. Entm't Merchants Ass'n, — U.S. —, 131 S. Ct. 2729, 2733 (2011) (stating that video-games deserve First Amendment protection).

[23] *See* Tim Wu, *Machine Speech*, 161 U. PA. L. REV. 1495, 1496 (2013); Stuart Minor Benjamin, *Algorithms and Speech*, 161 U. PA. L. REV. 1445, 1450 (2013).

[24] Wu, *supra* note 23, at 1498.

[25] *See* Bland v. Roberts, 730 F.3d 368, 380 (4th Cir. 2013).

obscenity, and child pornography will receive no First Amendment protection regardless of their vessel.

Wu and Benjamin reach opposing conclusions about where the line should be drawn on First Amendment protection for machine speech. Benjamin would exclude "algorithmic outputs that do not reflect human decision making,"[26] whereas Wu advocates for an extended application of the functionality doctrine that he detects in First Amendment jurisprudence.[27] Regardless, it is clear that any attempt at line drawing requires an accounting for at least three dimensions of the problem. Not only must the specific character of algorithmic output in question be identified, but, equally important, courts and scholars attempting to fit new technologies into existing First Amendment schema must contemplate the type of restriction at issue and establish first principles as well.

B. Media Law

1. Adjudicated Issues in Media Law: Implications of Brown for Automated Journalism

In *Brown v. Entertainment Merchants Association*, the Supreme Court spoke volumes about the First Amendment value of algorithmic speech by its omission of any acknowledgement of the category.[28] In that case, the constitutionality of California Assembly Bill 1179, which prohibited the sale of some violent video games to minors, was in question.[29] Specifically, the Bill banned the sale of those games for which a "reasonable person, considering the game as a whole, would find appeals to a deviant and morbid interest of minors."[30]

The statute was therefore a content-based restriction; one question addressed by the court was whether the videogame medium was truly speech. The Court's opinion, written by Justice Scalia, dispenses with this query immediately: "California correctly acknowledges that video games qualify for First Amendment protection."[31] The idea that the output might be distinguishable from the code that created the game is not touched upon. Rather, Scalia is blunt in stating the Court's view that "[l]ike the protected books, plays, and movies that preceded them, video games communicate ideas — and even social messages — through many familiar

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[26] Benjamin, *supra* note 23, at 1450.
[27] Wu, *supra* note 24, at 1479.
[28] Brown, — U.S. at —, 131 S. Ct. at 2733.
[29] *Id.* at 2732.
[30] *Id.*
[31] *Id*. at 2733.

literary devices … that suffices to confer First Amendment Protection."[32] In fact, Scalia writes, "whatever the challenges of applying the Constitution to ever-advancing technology, 'the basic principals of freedom of speech and the press, like the First Amendment's command, do not vary,' when a new and different medium for communication appears."[33]

Because the Court holds that the conveyance of "ideas" and "social messages" is sufficient for First Amendment protection, it appears that the relatively narrow question of whether stories created by automated journalism programs will be treated as speech can be answered in the affirmative.[34] Though Scalia moves on from the speech categorization question without much discussion (as the point was uncontroverted by the parties in dispute), the Court's justification for the holding is worth parsing further — what happens if an algorithmic output lacks the requisite "ideas" or "social messages?"

Rather than grounding its argument in any of the traditional theories of protection, the Court avoids explicitly endorsing any framework in favor of oblique references (intended or not) to the marketplace of ideas[35] and safety valve theories.[36] The Court also touches on a justification from history in stating, "[f]or better or worse, our society has long regarded many depictions of killing and maiming as suitable features of popular entertainment, including entertainment that is widely available to minors."[37]

The overarching result of *Brown* is clarity as to the speech value of machine output of the highest cognitive level — specifically, output expressing ideas and social messages along the lines of what humans express. This clearly includes automated journalism. Accordingly stories produced using automated journalism technology will trigger strict scrutiny for content-based regulation and intermediate scrutiny for content-neutral regulation.

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[32] *Id.*

[33] *Id.* (citing Burstyn, Inc. v. Wilson, 343 U.S. 495, 503 (1952)).

[34] To elaborate, it is hard to imagine a court acknowledging that "ideas" and "social messages" are inherent in videogames yet lacking in a news story.

[35] The marketplace of ideas is the theory that "government has no power to decree [esthetic and moral judgments about art and literature], even with the mandate or approval of a majority." Brown, — U.S, at —, 131 S. Ct, at 2733 (quoting United States v. Playboy Entm't Group, 529 U.S. 803, 818 (2000)).

[36] The safety valve theory states that "the obscenity exception to the First Amendment does not cover whatever a legislature finds shocking, but only depictions of "sexual conduct." Brown, — U.S, at —, 131 S. Ct. at 2734.

[37] *Id*. at 2745.

However, the court's reluctance to explicitly endorse one or several rationales for accepting video games as speech leaves open the issue of the speech value of more borderline cases: Do videogames that do not express an idea warrant categorization as speech? What about an automated journalistic output with incorrect input — seven paragraphs of gibberish about the market's expectations for the National League MVP's third quarter earnings? In declining to address the foundation from which it categorized video games as speech beyond repeated reference to the jurisprudential tradition of recognizing new technologies as they arise, the Court missed a valuable chance to pick the low hanging fruit of the machine speech conversation. As discussed below, issues concerning authorship and personhood are much thornier and harder to reach.

2. Open Questions in Media Law: Defamation

Given the several sources of human control inherent in a piece of automated journalism — e.g. the input may be recorded falsely by an overworked newsroom employee, the algorithm may contain flaws that lead to inconsistent output — there is real potential for automated pieces to occasionally contain inaccuracies or falsehoods. This means that the potential exists for disgruntled subjects to commence legal action against outlets that use automated journalism technologies. However, in a defamation suit, the analysis might be different than it would be for a piece authored by a human. For instance, imagine that a Forbes employee accidentally entered data from 2009 into the algorithm that created the story about Aeropostale quoted above. The story is a prediction, and would still register as such, but it would be premised on false information.

A prima facie defamation claim requires that the defendant publish a false, defamatory statement of fact concerning the plaintiff, with some level of fault with respect to the falsity of the statement.[38] The implications of some parts of this definition are independent of the machine status of the author. However, some aspects of such a claim, especially the level of fault, raise interesting implications for the best practices of a media organization attempting to regularly publish stories produced by an algorithm.

The truth or falsity of the statement is one aspect of defamation that will not have to be re-examined in light of a machine author. This is because courts have tended to make tests of the meaning of the words in question dependent on the understanding of outside parties, rather than on the intent of the writer. Some courts ask, "How would a reasonable actor interpret the allegedly defamatory

[38] RESTATEMENT (SECOND) OF TORTS § 558 (1977).

statement?"[39] Others afford the statement a meaning that would be given by a reasonable person of ordinary intelligence.[40] In either case, the court adopts an external, reader-centric viewpoint; the intent or status of the writer will not be in question at this point.

United States courts generally require that a statement's topic contain a degree of moral opprobrium in order to be defamatory.[41] This, too, is a requirement that hinges on the perception of readers, not on the intent or actions of the defendant. Still, one can imagine a situation in which the relevant moral opinion of a "substantial and respectable minority," [42] of the community is influenced differently by a statement written by a human versus that of an algorithm. But until courts decide on an appropriate application of scienter, it will be difficult to predict the way this standard will swing.

i. How should actual malice or negligence be determined in defamation cases arising from animated journalism articles?

The level of fault required in a successful defamation suit depends on the type of plaintiff claiming to have been defamed. For public figures and public officials, "actual malice" is required for defamation to be found.[43] (For non-public figures, mere negligence is the standard; see the discussion below.) Actual malice is defined as false information published "with knowledge that the information was false," or with "reckless disregard for whether it was false or not." This is a

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[39] *See, e.g.*, Masson v. New Yorker Magazine, Inc., 501 U.S. 496, 515 (1991) ("[W]e can think of no method by which courts or juries would draw the line between cleaning up and other changes, except by reference to the meaning a statement conveys to a reasonable reader.").

[40] *See, e.g.*, Romaine v. Kallinger, 537 A.2d 284, 288 (N.J. 1988) ("In making this determination [on whether the statement at issue is reasonably susceptible of a defamatory meaning], the court must evaluate the language in question according to the fair and natural meaning which will be given it by reasonable persons of ordinary intelligence." (internal quotation marks omitted)).

[41] For instance, false information about a party's address would probably not be defamation, but falsely descriptions of a party abusing his child probably would be. *See, e.g.*, Moss v. Camp Pemigewassett, Inc., 312 F.3d 503, 507 (1st Cir. 2002) (defining a defamatory statement as one that "tends to lower the plaintiff in the esteem of any substantial and respectable group of people" and finding that false accusations of "inappropriate contact" with young campers meet the definition) (citation omitted).

[42] *See* Jews For Jesus, Inc. v. Rapp, 997 So. 2d 1098, 1100 (Fla. 2008) (quoting Restatement (Second) of Torts § 559 (1972)).

[43] *See, e.g.*, New York Times Co. v. Sullivan, 376 U.S. 254, 279–80 (1964); Curtis Pub. Co. v. Butts, 388 U.S. 130, 133–34 (1967).

standard based on the state of mind of the publishing party — unlike the standards for moral opprobrium and falsity, the actual malice standard asks the court to take into consideration the mindset of the speaker and not simply the perception of subjects or recipient parties.

This has not traditionally been a problem, nor would it be for a mass media enterprise in possession of an automated journalism program today. The court would simply be able to impute the level of fault of a publishing entity, through its various copy editors and fact checkers, in much the same way it does in other organizational contexts. But that set up is certainly the easy case in today's media landscape, as the Internet has decreased the cost of publishing to almost nothing. This has enabled individuals or small enterprises without traditional editing systems to reach larger audiences than ever before.

For an illustration of the problem of assigning a mental state for works produced via automated journalism, recall the crossed input example above, with some tweaks to avoid complications posed by group or organizational defamation. Imagine a computer programmer with a passing interest in politics. On his personal computer, he registers a domain name for a website onto which he begins to post blog entries. After a while, his workload picks up, and he begins staying later at the office. So as not to abandon his side project, he licenses or creates an algorithm that combines keywords from certain news stories with results from a reputable public opinion poll to create articles juxtaposing candidates' latest public statement with their polling numbers on that topic. After seeing that it has worked correctly the first few days, he lets this program run without supervision. But soon, due to a programming error that confuses the two inputs in a small number of cases, the headline appears about a popular but beleaguered candidate: "Smith tells voters he's accepted campaign bribes, 75% believe 'I love this country.'" Would that publisher's failure to exercise oversight over the automated statement generated by his algorithm rise to the level of actual malice? What if, instead of a public figure, the defamed subject's name and information were pulled randomly from the blogger's Facebook friends? The private figure analysis is even more fraught with difficulty.

Clearly, the algorithm itself cannot be said to have acted with actual malice or even negligence in any situation. One interesting effect of automated journalism is that it removes any possible culpability from the "writer" of the story and places it squarely upon the publisher, whether a media conglomerate or an individual blogger. Precedent indicates courts' hesitance to assign this level of responsibility to a non-writing party.

Taking public figures first, the mere failure of a fact checker to catch an error does not rise to the level of actual malice.[44] In fact, courts have held that even a publisher's possession of facts that contradict false information contained in a story does not automatically amount to actual malice, either (though, it would violate the negligence requirement for defamation cases in which the plaintiffs are non-public figures or public officials).[45]

However, there are instances in which editorial oversights are egregious enough to rise to the level of actual malice, particularly in cases where there is evidence of some suspicion that further investigation may be needed to verify information contained in a story.[46] For instance, the Supreme Court has held that "inherently improbable" information, such that "only a reckless man would put … in circulation," may lead to a finding of actual malice when a publisher does not follow up with fact checking.[47] In *Harte-Hanks Communications, Inc. v. Connaughton*, the Court further clarified that "evidence of an intent to avoid the truth" is also sufficient to satisfy the actual malice standard.[48]

For private individuals, however, the only constitutional requirement placed on state defamation statutes is that the plaintiff be required to show negligence.[49] While some state statutes, such as New York's, heighten the standard by "requir[ing] private figure[s] to show that the media defendant acted in a grossly irresponsible manner regarding its statements about a legitimate public concern," others, like Pennsylvania, require only that a private figure show "mere negligence."[50] So, while a news outlet's failure to catch a mistaken defamatory statement about a public figure might not lead to a successful defamation claim in

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[44] *Sullivan*, 376 U.S at 277–78 (finding that "negligence in failing to discover the misstatements … is constitutionally insufficient to show the recklessness that is required for a finding of actual malice).

[45] Great Lakes Capital Partners Ltd. v. Plain Dealer Publ'g Co., 8th Dist. Cuyahoga No. CV-599853, 2008-Ohio-6495, ¶ 45.

[46] 1 RODNEY A. SMOLLA, LAW OF DEFAMATION § 3:49 (2d ed.).

[47] St. Amant v. Thompson, 390 U.S. 727, 732 (1968).

[48] Harte-Hanks Commc'ns, Inc. v. Connaughton, 491 U.S. 657, 693 (1989).

[49] Gertz v. Robert Welch, Inc., 418 U.S. 323, 347 (1974) (holding that "states may define for themselves the appropriate standard of liability" as long as they do not "impose liability without fault" for defamatory injuries to private individuals).

[50] Franklin Prescriptions, Inc. v. The New York Times Co., 267 F. Supp. 2d 425, 432 (E.D. Pa. 2003).

some jurisdictions,[51] a simple user input error could lead to culpability in others. Though state-by-state analysis is not conducive to generalized discussion, the negligence requirement, at least, seems to translate fairly well from traditional journalism — the requirement is that an editor or fact checker act as a reasonably prudent person would under a corresponding set of circumstances.[52]

It will also be important for courts to determine whether automated journalism programs act as newsgatherers, or whether their function is more akin to that of a page designer. In other words, is the main function to report a previously unknown story or to take a story that the media entity already owns and simply place it on the page? Criticisms of either view are conceivable — an algorithm, by definition, relies on input that the news outlet must have in its possession. On the other hand, such a program may perform a reporting function in its ability to draw conclusions from a quantity or type of data that would be impractical for human reporters.

Will courts continue to apply the current standards, which afford leeway for poor fact checking by publishers, to defamation cases where the "writer" of an allegedly defamatory story is a computer rather than a human being? If courts are sympathetic to viewing algorithms as newsgatherers, perhaps one way to determine how they will treat such cases is to see how they have dealt with unknown or unreliable writers or sources. In *St. Amant v. Thompson*, the Supreme Court stated, "Professions of good faith will be unlikely to prove persuasive, for example, where a story is fabricated by the defendant, is the product of his imagination, or is based wholly on an unverified anonymous telephone call."[53] Based on this skepticism of "unverified" sources, lower courts have been loath to accept arguments of good faith reliance upon anonymous sources without further verification prior to publication.[54]

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[51] *See, e.g.*, Chapadeau v. Utica Observer-Dispatch, Inc., 341 N.E.2d 569, 571 (N.Y. 1975) (stating that failure of newspaper to catch an error does not raise a question as to "grossly irresponsible conduct" so as to preclude summary judgment in its favor).

[52] *See, e.g.*, Straw v. Chase Revel, Inc., 813 F.2d 356, 359 (11th Cir. 1987) ("The jury was entitled to find that Mr. Smith's failure to verify the assertions contained in it amounted to a failure to exercise that degree of care exercised under the same or similar circumstances by ordinarily prudent persons…").

[53] *St. Amant*, 390 U.S. 732.

[54] *See, e.g.*, Holter v. WLCY T.V., Inc., 366 So. 2d 445, 453 (Fla. Dist. Ct. App. 1978) ("[W]here an anonymous tipster conveys the information, one would be hard put not to have serious doubts about the authenticity of the tip.").

The analogy is imperfect, but one might extrapolate from these examples that courts will ask publishers of automated journalism — which, in a way, involve unnamed sources — to meet a higher level of verification than they would ask for traditional human-written pieces. But if courts view automated journalism programs as simple republishers, the fact checking question would fall to the original data gatherers instead.

ii. How will Section 230 be applied to the new technology?

Section 230 of the Communications Decency Act ("CDA") limits the liability of online service providers for defamation claims. Congress passed the section as an explicit response by Congress to the ruling in *Stratton Oakmont v. Prodigy*, which held that Prodigy could be liable for statements made on its online bulletin board, even if Prodigy had no knowledge of the information being posted.[55] In part, the section reads, "No provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider."[56] Interestingly, within § 230, Congress signaled its preference for a marketplace of ideas theory of the First Amendment as well as its distaste for the safety valve theory. As the section states, "It is the policy of the United States … to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, unfettered by Federal or State regulation … [and] to ensure vigorous enforcement of Federal criminal laws to deter and punish trafficking in obscenity, stalking, and harassment by means of computer."[57]

Section 230 has had several implications for algorithm-generated content since its passage in 1996. For instance, in *Parker v. Google, Inc.*, Google's status as an interactive computer service immunized it from libel claims stemming from the search engine's caching and displaying of defamatory content originally created by USENET users.[58] Courts have also found immunity for website operators whose sites contain defamatory material in posts that they did not author.[59]

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[55] Stratton Oakmont, Inc. v. Prodigy Servs. Co., 1995 WL 323710, at *3 (N.Y. Sup. Ct. May 24, 1995).

[56] 47 U.S.C.A. § 230.

[57] *Id.*

[58] Parker v. Google, Inc., 422 F. Supp. 2d 492, 500–01 (E.D. Pa. 2006) *aff'd*, 242 F. App'x 833 (3d Cir. 2007).

[59] Best W. Int'l, Inc. v. Furber, CV-06-1537-PHX-DGC, 2008 WL 4182827, at *9 (D. Ariz. Sept. 5, 2008).

To envision a more controversial application § 230, imagine an Internet provider who provides users with an algorithm with which they can input their own data. By statutory definition, a provider "means a provider of software … or enabling tools that … (A) filter, screen, allow, or disallow content; (B) pick, choose, analyze, or digest content." The applicability of § 230 to automated journalism will depend on how courts view the technology. If courts are apt to view the algorithm simply as a proxy for a traditional editor, it is unlikely that § 230 will provide shelter from defamation claims. Further, the Ninth Circuit has held that "the CDA does not grant immunity for inducing third parties to express illegal preferences" through the use of form questionnaires.[60] Only if courts give great deference to Congress' preference for the marketplace of information rationale as to third-party content hosted on the Internet could such an algorithm be viewed as a simple "tool" used by the "information content providers," to allow algorithm writers to escape culpability for any potential defamation.

C. Copyright

The oft-cited line from *Feist Publications, Inc. v. Rural Telephone Service Co., Inc.* is the starting point for most discussions of whether certain content is too formulaic or obvious to receive copyright protection: "The *sine qua non* of copyright is originality."[61] In that case, the Supreme Court found that entries in a phonebook were not protected because the facts therein (phone numbers, names, etc.) were not protected, and the organizational scheme employed (alphabetization by last name) was not original enough to meet the Court's standard. Justice O'Connor, writing for the Court, uncoupled the concepts of ideas within a work and the work's expression of those ideas, stating: "A factual compilation is eligible for copyright if it features an original selection or arrangement of facts, but the copyright is limited to the particular selection or arrangement. In no event may copyright extend to the facts themselves."[62]

At the highest level of abstraction, automated journalism stories consist of an algorithm, of input (known in the industry as clean data), and of prose output. However, the new technology poses a number of questions related to the organization and usage of clean data input. As for output, major questions on

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[60] Fair Hous. Council of San Fernando Valley v. Roommates.Com, LLC, 521 F.3d 1157, 1165 (9th Cir. 2008) ("Roommate's own acts – posting the questionnaire and requiring answers to it – are entirely its doing and thus, section 230 of the CDA does not apply to them.").

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

[62] *Id.* at 350–51.

assignation of authorship loom as the popularity of automated journalism technology grows.

1. Adjudicated Issues in Copyright: Protection for Algorithms

One relatively uncontroversial aspect of the new automated journalism technology is the protection of the algorithm itself. Professor Arthur Miller, in his article on copyright protection for computer programs, explains that just as other forms of expression have been codified into the Copyright Act, computer programs are the most recent candidate for the same reasons that Congress has historically extended intellectual property protection.[63] Miller notes that, historically, many new technologies have brought about "fear and concern" that the traditional doctrines and boundaries of protection would not cover them adequately, writing "[t]hese apprehensions were voiced about photography, motion pictures, sound recordings, radio, television, photocopying, and various modes of telecommunication … As their labors progressed, most members of CONTU[64] became convinced that computer programs were the latest manifestation of this recurrent phenomenon."[65]

In support of the 1980 Computer Software Copyright Act, Miller notes, "[c]omputer programs, like other literary works, are expressive. The imagination, originality, and creativity involved in writing a program is comparable to that involved in more time-honored literary works."[66] The 1980 Computer Software Copyright Act, now codified as 17 U.S.C. § 117, states in part that the lease, sale, and transfer of rights in a computer program or of its exact copies may be made only with the authorization of the copyright owner.[67] As for the definition of computer program, § 101 of the Copyright Act reads in relevant part, "A 'computer program' is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result."[68] There can be little doubt that the algorithm used to produce an automated journalism story falls under this rubric.

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[63] Arthur R. Miller, *Copyright Protection for Computer Programs, Databases, and Computer-Generated Works: Is Anything New Since CONTU?*, 106 HARV. L. REV. 977, 982–83 (1993) (articulating three reasons computer programs should be extended the same rights as other forms of expression).

[64] *See, e.g., id.* at 979 (CONTU is the National Commission on New Technological Uses, established by Congress in 1974).

[65] *Id.* at 982.

[66] *Id.* at 983.

[67] *See* 17 U.S.C.A. § 117(b).

[68] 17 U.S.C. § 101.

According to Miller, the fact that automated journalism algorithms are designed to mimic the human process of writing and are thus a form of artificial intelligence, does not change the paradigm.[69] In fact, the very thing that makes artificial intelligence different from standard computer programs "is more comfortably dealt with under traditional copyright principles than the issues raised by [1993's] comparatively mundane commercial software."[70] As Miller would have it, "these issues were nothing more than the same old wine, and they fit nicely into the old doctrinal bottles."[71]

2. Open Questions in Copyright: Forms, Fair Use, and Authorship

i. What protection should be given to the spreadsheet used to create automated journalism stories?

Facts cannot be copyrighted.[72] However, an interesting question arises when the role of facts for automated journalism is considered in context. In order to create news stories, many automated journalism programs require data sets to be organized in a specific fashion, generally through the use of a spreadsheet program.[73] These set-ups, which are used to organize "clean data," allow systematic sorting and usage of raw input into the eventual prose story. The organization of a typical spreadsheet may be particular to an algorithm, and may in fact be necessary to its function. As such, publishers may wish to protect the organization of their input, the input itself, or both. The law is somewhat in conflict on whether such organizational systems can be copyrighted.

In general, this has meant that creative compilations, using systems of organization less obvious than simple alphabetization, have been copyrightable.[74] However, some recent decisions in the Courts of Appeals have called into question the precise boundaries for protection on "blank forms." Since *Lotus Development Corp. v. Paperback Software International*, there has been a tension in the lower

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[69] *See* Miller, *supra* note 63, at 1036.

[70] *Id.*

[71] *Id.* at 979.

[72] *Feist*, 499 U.S. at 350–51.

[73] *See* Harper & Row Publishers, Inc. v. Nation Enterprises, 471 U.S. 539, 550 (1985); *accord*, S. Rep. No. 94–473, at 65 (1975) [hereinafter Senate Report].

[74] *See, e.g.*, Miller, *supra* note 63, at 1039 n.278 (citing instances in which non-alphabetized databases were/may be copyrightable and explaining growing Congressional debate over the issue).

courts between decisions that have granted protection to spreadsheet programs[75] with those that have denied it to the data-entry inroads used in professions like medicine and dentistry. Decisions denying copyright protection to such systems generally cite to the 1880 Supreme Court case *Baker v. Seldon*,[76] and to the Copyright Act, which states that no "idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated or embodied in such work," may receive protection.[77]

The circuits are split on how to treat so-called "blank forms." According to the Code of Federal Regulations, "[b]lank forms, such as time cards, graph paper, account books, diaries, bank checks, scorecards, address books, report forms, order forms and the like, which are designed for recording information and do not themselves convey information," are not subject to copyright.[78] But, considering the issues of construction inherent in that regulation,[79] the circuits have split on borderline cases.[80] The Ninth Circuit, in *Bibbero Sys., Inc. v. Colwell Sys., Inc.* articulated a bright-line rule for blank forms, stating that just because a form contains "possible categories of information" that does not make it any less blank: "[a]ll forms seek only certain information, and, by their selection, convey that the information sought is important. This cannot be what the Copyright Office intended by the statement 'convey information' in 37 C.F.R. 202.1(c)."[81] The bright-line rule for the Ninth Circuit is thus defined by what it calls the "text with forms" exception:[82] Text integrated with blank forms comprises copyrightable

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[75] *See* Lotus Dev. Corp. v. Paperback Software Int'l, 740 F. Supp. 37, 54 (D. Mass. 1990) (holding that some computer programs with literal and nonliteral aspects that are distinguishable from universal aspects of the article may be copyrightable).

[76] Baker v. Selden, 101 U.S. 99 (1879) (holding that the text of a book describing a special method is copyrightable, but the method itself is not). *Cf.* Utopia Provider Sys., Inc. v. Pro-Med Clinical Sys., L.L.C., 596 F.3d 1313, 1320 (11th Cir. 2010) (citing Baker v. Seldon, 101 U.S. 99 (1879); 17 U.S.C. § 102).

[77] 17 U.S.C. § 102(b).

[78] 37 C.F.R. § 202.1(c).

[79] Clearly, the list is not meant to be an exclusive rendering of things considered "blank forms." But, as there is no general definition given, courts have taken it upon themselves to shade in the rest of the picture.

[80] *See* Utopia Provider Sys., 596 F.3d at 1320 n.17 (discussing various cases which support the tension in the courts and the split over whether spreadsheets are copyrightable).

[81] Bibbero Sys., Inc. v. Colwell Sys., Inc., 893 F.2d 1104, 1107 (9th Cir. 1990).

[82] *Id.* at 1106–07 ("Although blank forms are generally not copyrightable, there is a well-established exception where text is integrated with blank forms").

work; blank forms, even those with unique organizations or carefully chosen categories, do not.

Other circuits, however, have declined to follow *Bibbero* in applying a bright-line rule.[83] In *Whelan Assos., Inc. v. Jaslow Dental Laboratory, Inc.*, the Third Circuit noted that like "the majority of courts," it would find copyrightability for blank forms "if they are sufficiently innovative that their arrangement of information is itself innovative."[84] Particularly useful for the purposes of this note is the Second Circuit's decision on this topic, in which it considered whether a "baseball pitching form," could be copyrighted.[85] According to the District Court's statement of facts, "[t]he form listed various statistics in a tabular format with a legend at the bottom to explain the categories." The creator of the form, George Kregos, included nine categories, among which were the names of the starting pitchers, the game time, which team was favored to win, as well as each pitcher's statistics for the current season and his success against the present opponent.[86]

Some newspapers then published Kregos's form in that precise format — a step less than one might imagine a company like Narrative Science taking.[87] The Second Circuit held that a decider of fact would not likely find Kregos' form to lack the creativity *Feist* requires, and that such a conclusion "certainly could not be reached as a matter of law."[88] Thus, the nearly identical form that the Associated Press had been circulating could be subject to an infringement claim by Kregos. More generally, the court noted, "all forms need not be denied protection simply

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[83] *See* Utopia Provider Sys., 596 F.3d at 1320 n.17 (summarizing many of the decisions weighing in on this issue).

[84] Whelan Associates, Inc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222, 1243 (3d Cir. 1986).

[85] Kregos v. Associated Press, 937 F.2d 700, 702 (2d Cir. 1991).

[86] Kregos v. Associated Press, 731 F. Supp. 113, 114 (S.D.N.Y. 1990), *aff'd in part, rev'd in part*, 937 F.2d 700 (2d Cir. 1991) ("The first major category lists each pitcher's statistics for the current season. Under this heading are the sub-categories of wins, losses, and earned run average. The second general category represents the pitcher's performance during his career against the scheduled opponent. Plaintiff further tailors this category to only include the pitcher's statistics against this opponent at the particular site where the upcoming game is to be played. This category is then divided into wins, losses, innings pitched, and earned run average. Finally, the last of the main categories lists various statistics for the pitcher's last three starts. Included within this category are wins, losses, innings pitched, earned run average, and men on base average ('MBA')").

[87] An automated journalism program could take a similar spreadsheet to Kregos's form to allow for an algorithm to produce previews upcoming baseball games in much the same fashion, but probably would not publish the underlying spreadsheet.

[88] Kregos, *supra* note 85, at 705.

because many of them fail to display sufficient creativity."[89] This is surely welcome news for the media entity that wishes to protect its unique method of data organization for the clean data it feeds into an automated journalism program.

Further good news for such entities, and in further contravention of the Ninth Circuit's bright-line rule, is the treatment computer spreadsheet programs have received. These programs have generally received copyright protection, resolving some of the tension at the margin of what is and is not considered a "blank form." The leading cases on this area both involve Lotus Development Corporation, which twice sued to protect the "menu command structure" of its program, Lotus 1-2-3, a main competitor in the market for spreadsheet applications in the late 1980s and early 1990s. In *Lotus Development Corp. v. Paperback Software Intern.*, the Massachusetts District Court found copyright protection for the command elements and menus of Lotus 1-2-3,[90] which comprise the parts of *any* spreadsheet program that can be considered creative and therefore protectable.

As noted above, it is a matter of some dispute whether the spreadsheet itself should receive copyright protection, but it is relatively clear that, in combination, a spreadsheet with attendant data is indeed copyrightable. One ancillary question to this discussion is whether a second news organization could use this spreadsheet and data combination for its own end by applying the doctrine of fair use. In other words, does the transformation that the clean data and spreadsheet undergoes on its way to becoming an English-language news story rise to the level needed for the fair use limitation to apply to the original author's exclusive copyright?

The four factors weighed in a decision as to whether a certain use of copyrighted work falls under fair use are: (1) the purpose and character of the use; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for the copyrighted work.[91] Also of note is the list of "purposes" identified in the Copyright Act's section on fair use, which includes "criticism, comment, news reporting, teaching … scholarship, or research."

An analogy can be drawn between the unauthorized use of an unpublished data-spreadsheet set and the facts of the case in *Harper & Row Publishers, Inc. v.*

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[89] Kregos, *supra* note 85, at 709.
[90] Lotus Dev. Corp. v. Paperback Software Int'l, 740 F. Supp. 37, 70 (D. Mass. 1990).
[91] 17 U.S.C.A. § 107.

Nation Enterprises.[92] That case, in which *The Nation* magazine had scooped *Time* magazine by publishing extensive quotes from an soon-to-be published excerpt of President Gerald Ford's memoirs for which *Time* had paid $25,000 for the right to publish, was decided for the plaintiffs on the grounds that "The Nation effectively arrogated to itself the right of first publication, an important marketable subsidiary right."[93] Fair use doctrine, Justice O'Connor wrote for the court, "has always precluded a use that 'supersedes the use of the original.'" On this view of the role organized data plays in the automated journalism process (that is, as a "marketable subsidiary right"), courts would be unlikely to be sympathetic to a fair use argument.

However, it is possible that courts would see the usage as a technological interchange — the data and its organization could be analogized to a videogame cartridge; the algorithm to a system that can interpret the data therein to form a cognizable image on a television screen. The analogy here would implicate the Ninth Circuit's decision in *Sony Computer Entertainment, Inc. v. Connectix Corp*.[94] In that case, Connectix corporation had created a "Virtual Game Station," which was intended to perform a very similar function as a Sony PlayStation, but, rather than hooking up to a television, the Virtual Game Station was designed to allow users to play PlayStation games on their computers.[95] Sony sued for a violation of the copyright it held in the PlayStation's firmware,[96] which was known as BIOS. The Ninth Circuit found that Connectix's reverse engineering and copying of BIOS for usage in its Virtual Game Station was "modestly" transformative, found fair use, and encouraged Sony to avail itself of the patent system. In sum, if courts view the cumulative input of automated journalism as similar to exclusive, unpublished news material, they will probably be unsympathetic to fair use arguments. However, if the material is seen more as a pathway or reverse engineering of a component piece necessary to the functioning of a system, fair use arguments are more likely to succeed.

ii. Who will courts favor in an authorship dispute?

A final open question in copyright implicated by automated journalism is the treatment of the output of such programs. The major question presented is one of

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[92] *Harper & Row Publishers, Inc.*, 471 U.S. 539.

[93] *Id.* at 549.

[94] Sony Computer Entm't, Inc. v. Connectix Corp., 203 F.3d 596, 598 (9th Cir. 2000).

[95] *Id.*

[96] Firmware is software that is embedded in a particular product to allow that product to permanently function as the manufacturer intended.

authorship. Namely, who is the author of the work generated by a computer for the purposes of the initial allocation of copyright?

There are three obvious potential answers to this question, not necessarily exclusive, each of which has been explored to a varying degree in scholarship surrounding this issue. First, the authorship for computer-generated works could be assigned to the programmer or firm who created the algorithm by which the work was generated. Second, it could be assigned to the data entry clerk or data provider, much like the authorship of a photograph attaches to the person standing behind the sight and depressing the shutter.[97] Or, third, the rights could be assigned to the computer program itself, by finding that the algorithm, in its creative endeavor, has attained the legal personhood necessary to be assigned copyright.

To illustrate how an argument for assigning exclusive rights to a computer program would proceed, Annemarie Bridy's recent article published in the *Stanford Technology Law Review* is instructive.[98] Essentially, the argument goes that legal personhood is *often* uncoupled from being human — business corporations and government agencies have legal personality in some instances, for example; on the flip side of the coin, slaves "were not legal persons at all under antebellum law."[99] Therefore, given the stunning advances made in computer-generated works, the law should be prepared to recognize the true talent (balancing the "creativity of the coder with the creativity of the code") by awarding some form of copyright to the algorithm itself.[100] An argument for such a drastic change in the copyright system reflects an opinion that "few on either side of the 'copyfights' would argue that the system is not broken, and many believe it is irretrievably so."[101]

So far, US courts have not agreed. One day automated journalism programs that "write" news stories may be accompanied by automated data collectors, automated newsroom meetings that decide which stories to pursue, automated data input systems, automated editors, and automated publishing suites. But until such a system is in place, the human input necessary for automated journalism to be produced will probably control the copyright.

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[97] C.f. Burrow-Giles Lithographic Co. v. Sarony, 111 U.S. 53 (1884).

[98] Annemarie Bridy, *Coding Creativity: Copyright and the Artificially Intelligent Author*, 2012 STAN. TECH. L. REV. 5 (2012).

[99] *Id.* at 69, n.157.

[100] Bridy would like to do so by recognizing AI-authored works as works for hire (from computers).

[101] *Compare* Annemarie Bridy, *supra* note 96, at 4 n.189, *with* Miller, *supra* note 63.

This being the case, the assignation of authorship between the former two categories articulated above — the programmer or the data entrant — will become a very important copyright question as automated journalism gains popularity and wider usage. In the famous case involving a photograph of Oscar Wilde, the Supreme Court found that the photograph in question was copyrightable and that such copyright vested initially in the person taking the picture (as opposed to the manufacturer of the camera or the subject of the photograph).[102] But the Court's opinion anticipated arguments that there was no creativity inherent in new technologies like photography, which held the composer at more of a remove from the process than previous methods like painting.

In predicting how courts will resolve the divide between programmers and those that input data, it is useful to return to the theoretical underpinnings of copyright law. Traditionally, American copyright law and jurisprudence "seeks to vindicate the economic, rather than the personal, rights of authors."[103] Where a strict moral conception of copyright might assert that all Polaroid photographs owe dependency to Edwin H. Land,[104] or that the creator of an algorithm has a claim in everything that algorithm output, our current pecuniary conception values the promulgation of technologies into more and newer works. If faced with the decision, therefore, courts will probably prefer the rights of parties who enter data over the claims of algorithm writers in deference to copyright law's abstract framework.

CONCLUSION

In both media law and copyright, the advent of new technology such as automated journalism raises important questions about attribution, mental state, fair use, and more. Some of the questions are easily answered, while others are unlikely to be definitively addressed by the courts for years. However, in identifying these new questions, while courts have been clear in defining a set of first principles and embracing a consistent theoretical structure for copyright law, they have been much less so in the media law realm.

This observation does not necessarily lead to a simple conclusion — one's penchant for judicial principles spanning time, taste, and technology probably

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[102] *Burrow-Giles Lithographic Co.*, 111 U.S. 53.

[103] Gilliam v. Am. Broad. Companies, Inc., 538 F.2d 14, 24 (2d Cir. 1976).

[104] Eric Pace, *Edwin H. Land Is Dead at 81; Inventor of Polaroid Camera*, NEW YORK TIMES (Mar. 2, 1991), http://www.nytimes.com/1991/03/02/obituaries/edwin-h-land-is-dead-at-81-inventor-of-polaroid-camera.html.

inform the perceived wisdom of articulating such principles. But as computer technologies rapidly proliferate and concepts like automated journalism arise, courts large and small will have to choose between ruling on correspondent questions case-by-case or picking a conceptual structure to follow.

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AMICUS BRIEF OF THE ELECTRONIC FRONTIER FOUNDATION AND THE ACLU OF VIRGINIA IN *RADIANCE FOUNDATION, INC. V. NAACP*

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SUMMARY OF ARGUMENT[1]

People often use the names of organizations, celebrities, and trademarked products, to comment on them, critique them, parody them, review their work, and more. A director might make a movie about fictional dancers who imitate Fred Astaire and Ginger Rogers, and call it "Ginger and Fred."[2] A musical group might write a song mocking Barbie and call it "Barbie Girl."[3]

Some might condemn the NRA by saying that it stands for "Next Rifle Assault" or "National Republican Association."[4] Others might criticize NBC by saying that it stands for "Nothing But Caucasians,"[5] or the ACLU by saying that it stands for "Anti-Christian Lawyers Union."[6] Still others might do what Radiance did here: criticize the NAACP by saying that it stands for "National Association for the Abortion of Colored People,"[7] on the theory that the NAACP "has publicly supported Planned Parenthood numerous times," has "fought to prevent the abortion chain from being defunded while simultaneously fighting to ensure a massive influx of funding for its beloved ally (and annual convention sponsor)," and has otherwise allied itself with Planned Parenthood.[8]

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[1] To retain consistency with the filed brief citations have been verified, but not re-formatted to conform with blue book standards. Additionally, sections have been moved or deleted to better suit the journal format. For an unedited version of the brief *see* https://www.eff.org/files/2014/10/11/eff_alcu_amicus_brief_-_radiance_v_naacp.pdf.

[2] *Rogers v. Grimaldi*, 875 F.2d 994 (2d Cir. 1989).

[3] *Mattel, Inc. v. MCA Records, Inc*., 296 F.3d 894 (9th Cir. 2002).

[4] Chris Williams, *The NRA Stands for Next Rifle Assault,* The Huffington Post, Jan. 17, 2013, http://www.huffingtonpost.com/chris-williams/the-nra-stands-for-next-r_b_2490767.html; Michael J. McCoy, *NRA: The National Republican Association*, TIMES-HERALD, Mar. 27, 2013.

[5] Ruben Navarrette Jr., *Biggest Story Never Told Is Latinos Missing from the Media*, CONTRA COSTA TIMES, Aug. 24, 2011.

[6] Neo-Con* Tastic, *Anti-Christian Lawyers Union*, Nov. 16, 2005, http://neo-contastic.blogspot.com/2005/11/anti-christian-lawyers-union.html; Ed Brayton, *The Anti-Christian Lawyers Union*, Dispatches from the Creation Wars, May 30, 2008, http://scienceblogs.com/dispatches/2008/05/30/the-antichristian-lawyers-unio/ (sarcastically referring to this decoding in a post that stresses that the ACLU actually protects the rights of Christians).

[7] *Radiance Found., Inc. v. Nat'l Ass'n for the Advancement of Colored People*, 2014 WL 2601747 (E.D. Va. June 10, 2014).

[8] Ryan Bomberger, *NAACP: National Association for the Abortion of Colored People*, Jan. 16, 2013, http://www.lifenews.com/2013/01/16/naacp-national-association-for-the-abortion-of-colored-peopl/.

Courts have recognized that such speech is constitutionally protected, even when there is a risk that some people might be briefly confused about the source of the speech. *Rogers v. Grimaldi*, 875 F.2d 994 (2d Cir. 1989), and *Mattel, Inc. v. MCA Records, Inc.*, 296 F.3d 894 (9th Cir. 2002), for instance, held that using a trademark in an artistic or political work's title does not violate the Lanham Act unless the use "has no . . . relevance to the underlying work whatsoever." *Rogers*, 875 F.2d at 999; *Mattel*, 296 F.3d at 902. The risk of some consumer confusion, the courts concluded, cannot outweigh the speaker's First Amendment right to freedom of expression. Likewise, Radiance's criticism of the NAACP contained in post titles is constitutionally protected.

Such uses of trademarks also do not constitute trademark dilution. Title 15 U.S.C. § 1125(c)(3) expressly excludes "noncommercial use[s] of a mark" from the dilution cause of action; as *Mattel* noted, this exclusion protects all uses other than "commercial speech" (*i.e.*, commercial advertising). *Mattel*, 296 F.3d at 905-06. That the *Barbie Girl* song involved in *Mattel* was aimed at making money did not make it a "commercial use" for dilution law purposes. Similarly, that Radiance's Web site is aimed partly at making money—a property the site shares with nearly all newspapers, magazines, books, movies, and other fully protected materials—does not make Radiance's political commentary "[c]ommercial use of a mark" under § 1125(c)(3).

The district court therefore erred in accepting the NAACP's trademark infringement and trademark dilution theories. *Amici* ask this Court to reverse and to hold that Radiance should have been granted a declaratory judgment that its posts were not infringing.

ARGUMENT

I
RADIANCE'S USE OF THE TERM "NAACP" IN AN ARTICLE TITLE WAS NOT INFRINGING ON A CONFUSION THEORY

In talking about people, organizations, and products—including talking about them using speech that makes the speaker money—critics and commentators often use trademarks, sometimes in ways that mock or condemn the target. Such speech might also include statements that are facetious, but that help convey the desired message. NRA, the initials of the pro-gun-rights group, actually stand for National Rifle Association, but the mocking label "the National Republican

Association" helps the critic express what he views as the organization's true nature.[9]

Such uses of a name might sometimes briefly confuse a handful of listeners. A reader unfamiliar with the organization may mistakenly believe that NRA indeed stands for "National Republican Association," that the ACLU indeed stands for the "Anti-Christian Lawyers Union," or that the NAACP is indeed endorsing the abortion of African Americans. But the law cannot undermine the freedom of speech simply because a few people make a mistake.

Rogers v. Grimaldi, 875 F.2d 994 (2d Cir. 1989), and *Mattel, Inc. v. MCA Records, Inc.*, 296 F.3d 894 (9th Cir. 2002), make clear that such uses of trademarks in titles are not actionable even when some viewers are likely to be confused. In *Rogers*, a filmmaker was sued by Ginger Rogers for his use of the film title "Ginger and Fred." The film was not about Rogers and her film partner, Fred Astaire, but about two other dancers who imitated the duo onstage. *Id.* at 996-97.

Rogers argued that potential viewers might well be confused by the reference, and might mistakenly believe that Rogers or Astaire had endorsed the film. *Id.* And indeed it is possible that some viewers might have bought tickets to the film because they believed it to be so endorsed, or at least more directly connected to Rogers' and Astaire's lives.

Yet despite survey evidence showing likely confusion and evidence of actual confusion, *Rogers*, 875 F.2d at 1001, the court found that the defendant had not violated the Lanham Act. *Id.* at 997. The court held that, "in the context of allegedly misleading titles using a celebrity's name," there is no Lanham Act violation "unless the title has no artistic relevance to the underlying work whatsoever, or, if it has some relevance, unless the title explicitly misleads as to the source or content of the work." *Id.* at 999. And the court concluded that, as to *Ginger and Fred*, "the consumer interest in avoiding deception is too slight to warrant application of the Lanham Act." *Id.* at 1000.

The *Rogers* approach was adopted by *Mattel, Inc. v. MCA Records, Inc.*, 296 F.3d 894 (9th Cir. 2002), which dealt with a Lanham Act claim based on a musical group's song called "Barbie Girl." Mattel, the owner of the "Barbie" trademark, sued the record company for trademark dilution and infringement. The court disagreed, concluding that, "when a trademark owner asserts a right to control how

[9] Michael J. McCoy, *NRA: The National Republican Association*, TIMES-HERALD, Mar. 27, 2013.

we express ourselves," "applying the traditional test fails to account for the full weight of the public's interest in free expression." *Id.* at 900.

And the court concluded that letting trademark claims trump free speech rights was especially inappropriate when the use was a title. "A title is designed to catch the eye and to promote the value of the underlying work. Consumers expect a title to communicate a message about the book or movie, but they do not expect it to identify the publisher or producer." *Id.* at 902. Therefore, the court held, "literary titles do not violate the Lanham Act 'unless the title has no artistic relevance to the underlying work whatsoever, or, if it has some artistic relevance, unless the title explicitly misleads as to the source or the content of the work.'" *Id.* (quoting *Rogers*, 875 F.2d at 999). The court concluded that the use of "Barbie" in the title was not enough to satisfy the "explicitly misleads as to the source or the content" test; "if this were enough to satisfy this prong of the *Rogers* test, it would render *Rogers* a nullity." *Id.* at 902.

As in *Mattel*, Radiance used a trademarked term in the course of criticizing it. The trademark was used in the title of a work and was directly related to the article itself. Just as "[t]he song [*Barbie Girl*] does not rely on the Barbie mark to poke fun at another subject but targets Barbie herself," *Mattel*, 296 F.3d at 901, so the Radiance articles did not rely on the NAACP mark to criticize another subject, but targeted the NAACP itself. As in *Mattel*, there is the possibility that some people might be confused by the title's reference. But, as *Mattel* and *Rogers* show, that possibility cannot suffice to trump Radiance's First Amendment rights, given the importance of the right to refer to, comment on, or criticize famous organizations, people, and products.

E.S.S. Entertainment 2000, Inc. v. Rock Star Videos, Inc., 547 F.3d 1095 (9th Cir 2008), likewise followed the *Rogers* test. In *E.S.S. Entertainment*, a video game set in East Los Angeles portrayed a strip club that was clearly representative of the plaintiff's club; the club owner sued the video game creator for trademark infringement.

As in *Mattel* and *Rogers*, the court concluded that artistic or political use of a trademark will not violate the Lanham Act so long as "the level of relevance [to the underlying work is] merely . . . above zero." *Id.* at 1100. And though "the Game is not 'about' the [club] the way that Barbie Girl was about Barbie," the court held, "given the low threshold the Game must surmount, that fact is hardly dispositive." *Id.* Because the neighborhood that the game was trying to recreate was "relevant to Rockstar's artistic goal," Rockstar had the right to "recreate a critical mass of the

businesses and buildings that constitute it" by "includ[ing] a strip club that [was] similar in look and feel" to the plaintiff's club. *Id.*

As with the defendants' speech in *Rogers*, *Mattel*, and *E.S.S. Entertainment*, Radiance's use of NAACP's trademark in the title of an article was directly relevant to the article's political goal and did not explicitly mislead as to the source or content of the article. At most it led some people to briefly misunderstand what "NAACP" stood for—but the risk of misunderstanding the title was present in *Rogers* and *Mattel* as well, and the Second and Ninth Circuits held that this risk was not enough to justify restricting defendants' speech.

Rogers, *Mattel*, and *E.S.S. Entertainment* show that the First Amendment broadly protects cultural reference, commentary, criticism, and parody, including when such speech uses another's trademark. The district court thus erred in viewing the possibility of some consumer confusion as trumping Radiance's free speech rights. The district court likewise erred in admitting the expert report presented by NAACP, given that, under these precedents, the report's assertions are irrelevant.

And the Second and Ninth Circuit's analyses in *Rogers*, *Mattel*, and *E.S.S. Entertainment* are sound. To be sure, in any group of potential viewers or listeners, some people might not think hard about what is being said and might thus reach the wrong conclusion. But in most situations, a brief further review will clear things up. "[M]ost consumers are well aware that they cannot judge a book solely by its title any more than by its cover." *Rogers*, 875 F.2d at 1000. And even if there is some risk of consumer confusion, that cannot justify interfering with the First Amendment rights of artists, social commentators, and political commentators.

These precedents also show that the First Amendment protects the expressive use of others' trademarks for cultural or historical reference, commentary, criticism, *or* parody. The use of "National Association for the Abortion of Colored People" as a mocking decoding of "NAACP" was indeed "parody," "defined as 'a simple form of entertainment conveyed by juxtaposing the irreverent representation of the trademark with the idealized image created by the mark's owner.'" *People for Ethical Treatment of Animals v. Doughney*, 263 F.3d 359, 366 (4th Cir. 2001). "[E]ntertainment" need not arouse laughter or light-hearted pleasure; some political criticism can entertain precisely by being caustic. *See, e.g.*, ROSEMARIE OSTLER, SLINGING MUD: RUDE NICKNAMES, SCURRILOUS SLOGANS, AND INSULTING SLANG FROM TWO CENTURIES OF AMERICAN POLITICS (2011).

But even if the article title was not parody but was commentary or criticism, it should be protected. "Ginger and Fred," for instance, was a constitutionally protected reference to Rogers and Astaire but not a parody of them. And more broadly, political criticism must be at least as protected as humor and entertainment; indeed, when the Lanham Act expressly discusses "parodying," in 15 U.S.C. § 1125(c)(3)(A)(ii) (in the dilution section), it treats parodying on par with "criticizing[] or commenting upon" the mark.

II
RADIANCE'S USE OF THE TERM "NAACP" IN AN ARTICLE TITLE WAS NOT TRADEMARK DILUTION

A. Radiance's Speech Was a "Noncommercial Use" and Thus Expressly Exempted from Trademark Dilution Actions

Beyond its mistaken finding of confusion, the court below also mistakenly found trademark dilution by failing to apply the exceptions laid out in 15 U.S.C. § 1125(c)(3).

To begin with, § 1125(c)(3) expressly exempts "any noncommercial use" of a trademark from Lanham Act action. As the Ninth Circuit held in *Mattel*, "'[n]oncommercial use' refers to a use that consists entirely of noncommercial, or fully constitutionally protected, speech," 296 F.3d at 905—which is to say, speech that "does more than propose a commercial transaction," *id.* at 906. As a result, the Ninth Circuit held that the *Barbie Girl* song, though distributed for profit, constituted a "noncommercial use" of the Barbie trademark.

Likewise, this Court has stated that Congress "did not intend for trademark laws to impinge the First Amendment rights of critics and commentators"; one First Amendment protection within "[t]he dilution statute" is that Congress "incorporate[d] the concept of 'commercial' speech from the 'commercial speech' doctrine," *i.e.*, "speech proposing a commercial transaction," into the "noncommercial use" exception. *Lamparello v. Falwell*, 420 F.3d 309, 313-14 (4th Cir. 2005) (citations omitted). The "noncommercial use" exception thus limits the dilution cause of action to commercial advertising (which does propose a commercial transaction), and excludes fully protected speech, even when that speech—like most speech in newspapers, magazines, films, songs, and similar media—is distributed with an eye towards raising money.

Mattel offered a detailed explanation for why this interpretation of "noncommercial use" is correct. Reading the "noncommercial use" exception as limited to non-money-making media, the court held, "would . . . create a

constitutional problem, because it would leave the FTDA [the Federal Trademark Dilution Act] with no First Amendment protection for dilutive speech other than comparative advertising and news reporting." 296 F.3d at 904. But this First Amendment difficulty can be avoided because the FTDA's legislative history suggests that "'[n]oncommercial use' refers to a use that consists entirely of noncommercial . . . speech" in the sense that "noncommercial speech" is used in First Amendment doctrine, *id*. at 905:

> The FTDA's section-by-section analysis presented in the House and Senate suggests that the bill's sponsors relied on the "noncommercial use" exemption to allay First Amendment concerns. H.R. Rep. No. 104-374, at 8, *reprinted in* 1995 U.S.C.C.A.N. 1029, 1035 (the exemption "expressly incorporates the concept of 'commercial' speech from the *'commercial speech' doctrine*, and proscribes dilution actions that seek to enjoin use of famous marks in 'non-commercial' uses (such as consumer product reviews)"); 141 Cong. Rec. S19306-10, S19311 (daily ed. Dec. 29, 1995) (the exemption "is consistent with existing case law[, which] recognize[s] that the use of marks in certain forms of artistic and expressive speech is protected by the First Amendment"). At the request of one of the bill's sponsors, the section-by-section analysis was printed in the Congressional Record. Thus, we know that this interpretation of the exemption was before the Senate when the FTDA was passed, and that no senator rose to dispute it.

Id. at 905-06 (emphasis added, some citations omitted). And this analysis is entirely consistent with this Court's reasoning in *Lamparello*.

The articles about the NAACP that Radiance posted were not "commercial speech" aimed at "proposing a commercial transaction." They were political advocacy aimed at communicating Radiance's views about the NAACP. That they appeared on a site that aimed to raise money for Radiance is irrelevant for purposes of dilution law, just as *Barbie Girl* being a commercially distributed song—and most movies, newspapers, magazines, and books being aimed at making money—is irrelevant for purposes of dilution law.

B. Radiance's Speech Was Not Actionable Dilution Because It Was Exempted Commentary and Criticism

Under § 1125(c)(3)(A)(ii) any use of a trademark is protected against a dilution claim if it is "identifying and parodying, criticizing, or commenting upon the famous mark owner or the goods or services of the famous mark owner."

Radiance used the NAACP's trademark to criticize the practices of the organization and to comment on how abortion affects the African-American community. Such uses are therefore exempted under § 1125(c)(3)(A)(ii).

Indeed, exceptions for commentary and criticism, such as those laid out for copyright infringement in 17 U.S.C. § 107, are a "First Amendment protection[]." *See Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539 (2007) (discussing "the First Amendment protections already embodied in . . . the latitude for . . . comment traditionally afforded by fair use"). Likewise, the exception for "parodying, criticizing, or commenting" in § 1125(c)(3)(A)(ii)—a close analog to the exception "for purposes such as criticism[or] comment" in 17 U.S.C. § 107—is also an important First Amendment protection. In this instance, and even independently of the "noncommercial use" exception, the § 1125(c)(3)(A)(ii) exception protects Radiance's rights to use NAACP's mark to criticize what Radiance sees as NAACP's improper stance on abortion.

CONCLUSION

Amici ask that this court follow *Rogers*, *Mattel*, and *E.S.S. Entertainment*—as well as the plain meaning of § 1125(c)(3)(A)(i)-(ii)—and conclude that Radiance's uses of the NAACP marks constituted neither infringement by confusion nor infringement by dilution.

INTEREST OF *AMICI CURIAE*

The Electronic Frontier Foundation ("EFF") is a nonprofit public advocacy organization devoted to preserving civil liberties in the digital realm. Founded in the nascent days of the modern Internet, EFF uses the skills of lawyers, policy analysts, activists, and technologists to promote Internet freedom, primarily through impact litigation in the American legal system. EFF has no position on the controversy over abortion.

EFF views the protections provided by the First Amendment as vital to the promotion of a robustly democratic society. This case is of special interest to EFF because incautiously defined intellectual property rights improperly restrict speech that should receive full First Amendment protections. It is thus important that the Lanham Act not be interpreted in a way that erodes long-standing First Amendment freedoms.[10]

[10] No party or party's counsel has authored this brief in whole or in part, or contributed money that was intended to fund preparing or submitting the brief. No person has contributed money that was intended to fund preparing or submitting the brief, except that UCLA School of

The American Civil Liberties Union of Virginia, Inc. is the state affiliate of the American Civil Liberties Union ("ACLU"), a nationwide, non-profit, non-partisan organization with more than 500,000 members dedicated to defending the principles of liberty and equality embodied in the Constitution and the nation's civil rights laws.

Among the top priorities of the ACLU is the defense of the freedom of speech guaranteed by the First Amendment. The ACLU generally strongly supports the NAACP, and its mission of racial justice. The ACLU also vigorously defends reproductive freedom, including a woman's right to choose an abortion. But despite its disagreement with the speech of Radiance Foundation, the ACLU of Virginia joins this brief in support of Radiance because it believes that the right to parody prominent organizations like the NAACP (and the ACLU) is an essential element of the freedom of speech.

Law paid the expenses involved in filing this brief. All parties have consented to the filing of this brief.

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APPLICATION OF A MECHANISM OF PROPORTIONAL REWARDS TOWARDS GLOBAL INNOVATION

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For a rule to have an optimally positive impact on society, it must be a valid regulation (a rule that comes to be enforceable); just (with an axiological goal); effective and efficient (that can extract a maximum amount of welfare, however understood, for the people it regulates). This article aims to advance the international regulation of patent protection by improving upon the axiological considerations of global regulation, while contributing to its effectiveness and efficiency. It does so by proposing the introduction of proportionality in the TRIPS Agreement, so that each country will contribute to technological development according to its economic capacity. A formula, which renders a politically feasible result, is used to further explain this theory. The chance of conceiving a healthy globalization based on formulas that encourage the cohesion of humanity should not be overlooked. That being reflected, an event of global generosity without precedent in the history of mankind would be witnessed. Hobbes's theory would be proven wrong, and cohesion of humanity would be globally envisioned. The Achilles heel of the idea presented in this paper is that it maybe utopian; it would not be surprising that once again it is proven that homo homini lupus.

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INTRODUCTION

The intent of this paper is to offer a mechanism for the application of a very simple and novel idea: the insertion of the principle of proportionality in the current international scheme of invention protection.[1] Those who have more should contribute more. This paper proposes a very simple formula to extrapolate this general principle of law (proportionality) to the international patent scheme as implemented by the Agreement on Trade-Related Aspects of Intellectual Property Rights (hereafter "TRIPS Agreement").

In relation to the global protection of inventions, John Sulston, winner of the Nobel Prize in physiology, asserted: "harmonization is obviously desirable in the long term, provided that at the same time the world becomes more egalitarian."[2] I agree. As discussed in my previous work, this hypothetical scheme could provide more space for harmonization.[3] First, proportionality could make the system more equalitarian with one single change.[4] Then, as a second step, it could induce the

[1] For further discussion of the principal of proportional protection of inventions *see* ESTEBAN DONOSO, A GLOBAL SOLUTION FOR THE PROTECTION OF INVENTIONS (2014);

Esteban Donoso, *Justicia, Vigencia y Eficacia del Régimen Internacional de Patentes de Invención* (Univ. Andina Simón Bolívar – Ecuador & Corporación Editora Nacional, Serie Magíster No. 98, 2011), *available at*

http://repositorio.uasb.edu.ec/bitstream/10644/3121/1/SM98-Donoso-Justicia.pdf.

[2] John Sulston, International Patent Law Harmonization 3 (Mar. 1, 2006), Presented at the WIPO Open Forum on the Draft Substantive Patent Law Treaty, *available at* http://www.wipo.int/export/sites/www/meetings/en/2006/scp_of_ge_06/presentations/scp_of_ge_06_sulston1.pdf. For a statistical analysis of the implication of patents on follow-on research, *see generally* Bhaven Sampat & Heidi L. Williams, How Do Patents Affect Follow-On Innovation? Evidence from the Human Genome (Oct. 26, 2014) (Preliminary Draft), *available at* http://economics.mit.edu/files/9778.

[3] *See* Donoso *supra* note 1.

[4] Proportionality may be introduced without upending the entire system, but through modification of article 33 of the TRIPS Agreement. This proposal does not seek to overrule the current global agreement. The political issue should be recognized with pragmatism, as it is further developed.

proper application of the TRIPS Agreement's regulations in each country by punishing inadequate protection, and could even weigh disparities among countries' laws compensating those countries which reward fields that other countries exclude. This second step still needs further analysis. This paper only addresses the implementation of the first step of this new concept.

This paper first provides a general overview of the current patent system. It then addresses the proposal from a quantitative prospective, presenting a very simple mathematical mechanism for the implementation of a proportional reward system. It concludes with a practical proposal, while recognizing that there could be many methods to this end. The mechanism presented tackles the first of the proposal's objectives, which is to establish a global proportional reward system based on the economic status of the countries in question. As can be seen in the chart at the end of this paper, this proposal renders a realistic result, making it politically feasible. The next step will be to include in the equation incentives to effectuate protection.[5] This paper seeks to establish a starting point for discussion, not to provide all the answers that such a scheme will need.

I
BACKGROUND OF THE CURRENT GLOBAL SCHEME

The subjectivity inherent to the protection of inventions is a consequence of its very nature. The object of protection and duration are subject to the discretion of human conceptions. Thus, conceptually at least, we all can dream of different patent schemes, or even the inexistence of one. Nonetheless, there is a 20-year-long international status quo that has proven difficult to change.[6]

Over time, intellectual property evolution has determined that the current patent protection system is global, definitively linked to commerce, decentralized,

[5] Eventually, according to the TRIPS Agreement, countries will be able to activate the disputed settlement mechanisms in cases of deficient application of TRIPS' regulation. The decision at the Bali Ministerial Conference of 2013, however, extended once again the "moratorium" on non-violation disputes regarding intellectual property. *TRIPS: 'Non-Violation' Complaints–Background and the Current Situation*, WTO, http://www.wto.org/english/tratop_e/trips_e/nonviolation_background_e.htm (last updated Dec.3, 2009). Proportionality could finally unlock the door of the "moratorium." *See* Conclusion, *infra*.

[6] According to the TRIPS Agreement, a review was to take place four years after the entry into force of the WTO Agreements . Although the TRIPS Agreement was signed 20 years ago, no revisions have yet occurred. *Overview: The Trips Agreement*, WTO http://www.wto.org/english/tratop_e/trips_e/intel2_e.htm (last visited Nov. 19, 2014).

and a one-size-fits-all system.[7] Many would like to see this structure change, by eliminating or amending one or many of these characteristics.[8] Many others would like to see one or more of these characteristics strengthened. The system of proportionality proposed in this paper is not intended to change the overall nature of the current system, but to improve it by addressing some of the issues raised by those concerned with the current systems characteristics. In that sense it has a marked status quo bias, which provides it with political pragmatism.[9]

Addressing the discussion of the international patent system with a status quo bias implies that intellectual property rights are here to stay.[10] Thus, this paper does not tackle the "eternal" and unanswered causality question: does protection produce innovation, or, put it in a more general way, does the patent system "confer a net benefit or a net loss on society."[11] There is no concluding empirical

[7] "The TRIPS Agreement, which came into effect on January 1, 1995, is to date the most comprehensive multilateral agreement on intellectual property." *Overview: The Trips Agreement, supra* note 6. Its worldwide, linked-to-commerce characteristics come as a consequence of the WTO. Its decentralized nature is commented in the next footnote and its one size-fits-all nature is commented in footnote 49.

[8] As per the decentralized nature of the current global system, it goes without saying there are ways to give incentives other than by patents, which have advantages and disadvantages. "Whereas wealthy benefactors and governments can indulge in basic science and curiosity-driven research, a research agenda driven by patents is hostage to the market and to consumer sovereignty. The consumers who are sovereign are those with resources." SUZANNE SCOTCHMER, INNOVATION AND INCENTIVES 2 (2006). Many could dream of a global prize system. In the case of pharmaceutical research, for example, Joseph Stiglitz has proposed a "guarantee fund" (developing countries extending a purchase guarantee) and an "innovation fund" (a global prize rewarding research for widespread, costly diseases of particular concern to developing countries). JOSEPH E. STIGLITZ, MAKING GLOBALIZATION WORK 124 (2006). Different countries could and would still use prizes and incentives other than patents to spur innovation. This is not precluded by the current system, and of course would still happen under a proportionality scheme, which is without any doubt commendable.

[9] *See* William Samuelson & Richard Zeckhauser, *Status Quo Bias in Decision Making*, 1 J. Risk & Uncertainty 7, 45-46 (1988).

[10] "To the extent that property rights become established in the status quo, any attempt to move away will be blocked. … The status quo persists, and those who propose a change merely incur the wrath of others." *Id.* at 46.

[11] SUBCOMM. ON PATENTS, TRADEMARKS, & COPYRIGHTS OF THE S. COMM. ON THE JUDICIARY, 85TH CONG., 2D SESS, AN ECONOMIC REVIEW OF THE PATENT SYSTEM (Comm. Print 1958) (prepared by Fritz Machlup), *available at* http://mises.org/sites/default/files/An%20Economic%20Review%20of%20the%20Patent%20System_Vol_3_3.pdf (hereinafter, AN ECONOMIC REVIEW).

evidence available to properly answer these questions.[12] The ideas herein proposed refrain from engaging in this unsolved debate.

This paper provides a solution for the status quo, which will be on its own quite an achievement. In practical political terms, to improve the status quo a global consensus should be accomplished. In order to achieve this seemingly impossible goal, the proportionality proposal gives attention to some of the concerns expressed by both sides of the controversy, by means of symmetry.[13]

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[12] On October 24-25, 2014, NYU Law's Engelberg Center launched the Innovation Law & Policy Empirical Research Initiative. *See* Program, NYU Law Engelberg Ctr. on Innovation Law & Policy, Empirical IP Research Conference (Oct. 24-25, 2014), http://static.squarespace.com/static/540a9275e4b0cca5ad25c4a2/t/5447ea7ae4b07be3ba763ebc/1413999226088/empiricalprintagenda.pdf. The event started by quoting Fritz Machlup's AN ECONOMIC REVIEW, *supra* note 11, and then asking: "In 1958, economist Fritz Machlup famously concluded that 'none of the empirical evidence at our disposal' either confirms or confutes the belief that the patent system has promoted the progress of the technical arts and the productivity of the economy.' Can we say more than that today about the causal relationship between patenting and innovation? What can modern econometric and experimental approaches tell us about the effects that patenting has on the amount and direction of innovation?" *Id.* at 2. The consensus of the participants (academics, economist, lawyers, and statisticians from around the world) was that, as in 1958, there is no irrefutable empirical evidence to reach to a conclusion. To quote Machlup, "Scholars must not lack the courage to admit freely that there are many questions to which definite answers are not possible, or not yet possible. They need not be ashamed of coming forth with a frank declaration of ignorance. And they may make a contribution to knowledge if they state the reasons why they do not know the answers, and what kind of objective information they would have to have for an approach toward the answers." *Id.* at 79. This is exactly what the initiative comprises. The conference was the kick-off event of this ongoing initiative. The empirical initiative is commendable.

[13] Two poles of opinion have been generated. The current scheme rests on the assumption that exclusive rights over an invention spurs innovation. As Richard Epstein puts it, "[s]ocial progress in our technological age is intimately bound up with the creation and protection of intellectual property," implying that technical progress is a product of the protection of intellectual property. RICHARD A. EPSTEIN, MFG. INST., INTELLECTUAL PROPERTY FOR THE TECHNOLOGICAL AGE 7 (2006). Many others think that intellectual property appears as a consequence of the interest of those who first created new technologies and who wanted to exclude others form using it. Thus, they think that intellectual property comes as a consequence of technological progress, and not that technological progress came as a consequence of intellectual property. Some call for the "abolition of all forms of private property in ideas." Eben Moglen, The dotCommunist Manifesto 6 (Jan. 2003), *available at* http://old.law.columbia.edu/publications/dcm.pdf. Many adhered to the patent paradox theory and think that the patent monopoly leads to the destruction of competition and ensures protection only for powerful companies. Many others think that without reward there is no chance of technical progress. There is no unequivocal answer. Proportionality could probably help answer

What if those who say that the current patent system is key for innovation are absolutely right? What if those who say that the patent system does not work at all are absolutely right?[14] The answer for both questions, from an international commercial point of view, is that we should carry the burden of our mistakes or the cost of our mastery evenly, and thus proportionally to a countries' economic capacity. In this hypothetical system the interest in finding the right balance of protection will be higher, as the effects that a disproportionate protection potentially carries will be felt equally in all countries regardless of their state of economic development. This is the conceptual advantage of a proportional system.

The query does not stop here. It could be posed in regard to the amount or level of protection as well: are 20 years of exclusivity too much or not enough? What if the lack of enough protection is, for example, what has kept us from cold fusion?[15] This is a threshold public good in the sense that, theoretically at least, with enough research and development it could be produced.[16] To this end, the International Thermonuclear Experimental Reactor, a global project financed by international cooperation, seeks to generate unlimited virtually clean energy at a

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this question in the future, in the sense that it could sincere the positions of the different countries (and those who, in the academic sphere, are influenced by nationalism).

[14] These rhetorical questions are posed as if one of the two extreme positions is right. Probably the correct view sits in the middle.

[15] The answers could probably come from, among many other angles, a contributor's game perspective. It appears that public goods with lower thresholds and higher rewards are more likely to be provided. Current models apply for threshold public goods, which, due to the lack of certainty of a patentable result, most individually considered potential innovations are not. For an example of a threshold case study, *see* Scott Barrett, *The Smallpox Eradication Game*, 130 PUB. CHOICE 179 (2006). Regarding public good provision, *see generally*, Charles Cadsby & Elizabeth Maynes, *Voluntary Provision of Threshold Public Goods with Continuous Contributions: Experimental Evidence*, 71 J. PUB. ECON. 53 (1999); Ramzi Suleiman & Amnon Rapoport, *Provision of Step-Level Public Goods with Continuous Contribution*, 5 J. BEHAVIORAL DECISION MAKING 133 (1992); Hans-Theo Normann & Holger A. Rau, *Simultaneous & Sequential Contributions to Step-Level Public Goods: One vs. Two Provision Levels*, J. CONFLICT RESOLUTION (forthcoming, published online before print May 6, 2014), *available at* http://ssrn.com/abstract=1763442.

[16] In that sense, cold fusion is different that most research for innovation. *A priori* it is impossible to know if a specific research will render a patentable result. This is another fact that those in favor of the patent system invoke. "After the fact, patents are inconvenient because they restrict the use of valuable inventions. But before the fact they are necessary to create those same inventions. No one can assume that valuable inventions will pop up magically in the public domain if their inventors received no reward for their labor and capital. Most inventions are costly to design and fabricate." EPSTEIN, *supra* note 13, at 10.

marginal cost of zero.[17] This, arguably, could be humanity's greatest achievement (this could be the case of many other technologies not even conceivable at this point in time). The present study does not examine this question, though. It takes the current contribution, the status quo of twenty years, as a starting point. It argues for proportionality among the contributors, not for the perfect amount of contribution. Such a goal could only be attempted, if ever, after this first step is accomplished.[18]

This proposal's possibility of success rests in a commercial approach. The current regulations were established and are managed within the World Trade Organization framework.[19] Stiglitz, referring to the WTO, thinks that "[t]rade negotiators have little incentive to think about the environment, health matters, or even the overall progress of science."[20] Their mandate is to care for their own, for their national trade. It is evident why developing countries will like the proportionality proposal, which would grant shortened periods of protection in their circumscriptions. Why would countries that would have a longer period of protection under this proposal, typically inventive countries, agree with it? The answer is simple. There are potential gains from trade. As the late Garry Becker put it (with regard to pharmaceuticals): "The burden of paying for the development of the world's new drugs, however, falls overwhelmingly on Americans: Most other nations impose controls over drug prices or undermine patents through

[17] "ITER was first proposed in 1985, during a tense summit in Geneva between Ronald Reagan and Mikhail Gorbachev, who agreed to collaborate 'in obtaining this source of energy, which is essentially inexhaustible, for the benefit for all mankind.' Since then, the coöperation has expanded to include the European Union, China, Japan, South Korea, and India…. No one knows ITER's true cost, which may be incalculable, but estimates have been rising steadily, and a conservative figure rests at twenty billion dollars—a sum that makes ITER the most expensive scientific instrument on Earth." Raffi Khatchadourian, *A Star in a Bottle*, NEW YORKER, Mar. 3, 2014, *available at* http://www.newyorker.com/magazine/2014/03/03/a-star-in-a-bottle.

[18] This paper does not seek to establish the equilibrium or the optimal period of extension for a patent, just for an equitable reward. Proportionality could make it easier to obtain objective economic conclusions and consensus, if the patent monopoly is shouldered proportionally by the different countries or trade regions of the world.

[19] There is a lot of criticism regarding the linkage of intellectual property and international trade regulations. "Discussions over global standards for intellectual property should be taken out of the WTO and put back into a reformed WIPO, a World Intellectual Property Organization in which the voices of academia as well as corporations, consumers as well as producers, the developing as well as the developed countries, are all heard." STIGLITZ, *supra* note 8, at 128.

[20] *Id.* at 131. "The environment is the problem of the environmental minister, access to lifesaving medicines is the problem of the health minister, and the overall pace of innovation is a problem of the education, research, and technology ministers. So while trade agreements affect all of these areas, those who worry about them are not at the table." *Id*.

allowing cheaper generic copies. As a result, the U.S. is by far the most important market for recouping investments in new drugs…."[21]

This situation was not the intention of the rules that set the status quo (the TRIPS Agreement), but rather is the reality. Developing countries have furiously proclaimed that the TRIPS Agreement was imposed on them, causing much harm and little good.[22] Many important academics have legitimized this discontent, creating a "letter of marque" for individuals and even countries to disrespect the global regulations on intellectual property.[23] As a consequence, the coercion of the WTO in this issue has been undermined, since it is impossible (in light of the moratorium), and even politically inconvenient, for inventive countries to tackle every violation.

The political feasibility of the proposal rests under the assumption that, with proportionality, patent enforcement would improve in those countries in which it is deficient. Proper enforcement would not burst spontaneously from the application of proportionality, although a psychological effect towards this result could come from it.[24] Channels to achieve a proper application of the regulations by the different countries should be part of the compromise. Furthermore, as stated in the conclusion of this paper, a weighing mechanism that takes into account proper application of the rules, could be embedded in the formula presented.

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[21] Gary S. Becker, "*Get the FDA Out of the Way, and Drug Prices Will Drop*," BUSINESSWEEK, Sep 16, 2002, at 16, *available at* http://www.businessweek.com/stories/2002-09-15/get-the-fda-out-of-the-way-and-drug-prices-will-drop.

[22] For a historical recount of developing countries' perspective view, *see* DONOSO, A GLOBAL SOLUTION, *supra* note 1, at 8-44.

[23] A certain general tone of condemnation to patent holders, especially against pharmaceutical companies, has been present in the international arena since the late 1990s. "Pharmaceutical companies filed a lawsuit against the government of South Africa to contest the government's ability to use WTO access provisions—in this case, compulsory licensing—to make HIV/AIDS drugs available there. The case was dropped in April 2001." STIGLITZ, *supra* note 8, at 316 n.40. From then on the trend has been the same. For instance, Stiglitz describes developing countries that do not act like Brazil, which used its bargaining power and compulsory licenses threats to get a deal from Abbott for an antiretroviral medicine, as "less astute." *Id.* at 121. This letter of marque is even given to developed countries. "Myriad [Genetics] eventually developed a [cancer] screening technology, and asks $3,000 for a complete screen; it refuses to let other firms perform the screen. The province of Ontario is ignoring this, allowing its citizens to be screened for free." *Id.* at 314 n.26.

[24] *See* DONOSO, A GLOBAL SOLUTION, *supra* note 1, at 117-119.

II
THE MECHANISM AND ITS RESULTS
A. Basic Economic Considerations

From the previous segment we can draw the following broad and general conclusion: there is a disagreement regarding the utility of creating rights over inventions, yet humanity is entrenched in the current global system. To introduce proportionality in the current system is, assuming the system's main characteristics are impossible to change, compatible with both sides of the divergence. From a global theoretical perspective, stripped from nationalisms (the analysis of the advantages for a particular country), there conceptually will be motives to introduce proportionality for those in both poles of the divergence (and those in between), if the change does not increase the size of the "mistake" (in this context the "mistake" will be defined differently by those in either pole of the divergence), and if at the same time offers any additional advantage.[25] If there is not an additional advantage, an academic will at least remain indifferent. The good news for the proposal is that proportionality does offers additional advantages.

According to the proportionality proposal, innovators will receive *at least* the same reward as currently allotted, with a potential for increased revenue from the proper application of patent's rules.[26] Also, the main source of economic

[25] For a complete review of the axiological justification of this proposal, taking in account the positions of developed and developing countries, *see* DONOSO, A GLOBAL SOLUTION, *supra* note 1. The analysis in that study was developed based upon a triple validation criterion of the examined regulation, intending to unravel the justice, validity (its applicability) and effectiveness (understood as the ability of the rule to achieve the intended result) of the global patent system. If all of these potential properties of the rule are present in a given regulation, the rule achieves an optimal impact on society. Italian philosopher and historian, Norberto Bobbio, championed this way of analyzing regulations in some of his academic production (his main works have not yet been translated to English). In a very basic explanation, he states that when facing any regulation we can establish a triple order of problems: 1) if it is fair or unfair; 2) if it is valid or invalid; 3) if it is effective or ineffective. Put differently, regulations pose three different problems: one of justice, one of validity, and one of effectiveness. NORBERTO BOBBIO, TEORÍA DE LA NORMA JURIDÍCA at 45-55 (Jair L. Vieria ed., EDIPRO 2001) (1993), *available at* http://www.estig.ipbeja.pt/~ac_direito/BobbioNorma.pdf.

[26] From stage one of the application of this hypothetical system, firms that produce new technology will be better off due to the overall decrease in deadweight loss (an intrinsic advantage of the proportionality system, that entails more sales), plus a smother "collection" of that reward since it will be increased, as a compensation for shorter periods in poorer countries, in countries in which enforcement is typically done properly (an exogenous advantage of the system). More should be done to generate a proper application of the regulation in a worldwide scale (stage two). The agreement not to use TRIPS non-violation cases in dispute or settlement cases should probably (gradually) end in the face of proportionality (Article 64.2 moratorium,

inefficiency of the system (deadweight loss) will globally decrease, which will be advantageous to the overall global economy, particularly for innovators. Finally, access to new technologies will increase worldwide, which from a social point of view is of enormous importance. Nonetheless, not everyone will be a winner.[27] The negative effects created by the patent system will be reduced overall in a global scale, but will increase among the richest countries, proportionally to their wealth.[28]

Even though the patent as an incentive system is far from receiving unanimous support, there is an agreement on its main problem: deadweight loss.[29] "Deadweight loss occurs when people are excluded from using the good even though their willingnesses to pay is higher than the marginal cost."[30] From an economic point of view there is a net social loss because the sale is not produced. There is also an access problem. Stiglitz puts this in a necessarily crude social context with regard to medicine: "To an economist, this disparity between price

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see supra note 3). For example, an initiative by the World Customs Organization (WCO) and the World Intellectual Property Organization (WIPO) to permit customs authorities to resolve intellectual property issues *in situ* has been discussed in the past years (7th and 8th WCO Counterfeiting and Piracy (CAP) Group Meetings, Brussels, Belgium, October 23 and 24, 2012 and May 6 and 7, 2013. WIPO, *Recent Activities of WIPO in the Field Of Building Respect For Intellectual Property*, WIPO/ACE/9/2 (Jan. 22, 2014), at 9, http://www.wipo.int/edocs/mdocs/mdocs/en/wipo_ace_9/wipo_ace_9_2.pdf).

[27] A very interesting analysis comparing elasticity of public and private goods gives this paper a very applicable, almost ad-hoc, frame to argue for its feasibility. "I find that increases in price greatly diminish the proportion of people willing to pay for consumers goods, such as housing and hardback books; whereas the proportion willing to pay more in taxes to support a public good, such as environmental protection or shelter for homeless, is much less responsive to changes in price." Donald P. Green, *The Price Elasticity of Mass Preferences*, 86 AM. POL. SCI. REV. 128, 128 (1992). "Thus, not only are economic and political decisions different in character, but the fact that these decisions take place in different environments helps to sustain the schism between the consumer and the consumer's less price-conscious alter ego, the citizen." *Id.* at 140.

[28] Countries with a higher GDP per capita will have longer periods of protection, thus increasing two problems that the patent system generates (deadweight loss and reduction of the consumer surplus).

[29] *See* EPSTEIN, *supra* note 13, at 10,."The hard social question is whether the law should grant the exclusive right that raises the price above [the] marginal cost. The question would receive an easy affirmative answer if creating this monopoly carried no social price. But unfortunately the price paid comes in the form of dead-weight social losses."*Id.*

[30] SCOTCHMER, *supra* note 8, at 36.

and production cost is simply an economic inefficiency; to an individual with AIDS or some other life-threatening disease, it is a matter of life and death."[31]

Another comparatively less serious problem from the patent system is the reduction of consumer surplus (antitrust laws are mainly devoted to avoid it; patented products' sales are generally exempted from this regulations, though). Some consumers do not get excluded from using the patented good by paying more for it than the marginal cost. While this raises a distributional concern, it is not a social net loss. "A dollar is a dollar, no matter whose pocket it is in."[32]

Weighing the length of the patent so that consumers with higher income on average have longer periods of protection is the proper solution for dealing with deadweight loss, without affecting the current global reward. This could be done only if the reward that innovators lose in one country through shorter periods is compensated by a longer period in another country.[33] Under this proposal, limiting the time of the patent in poor countries reduces deadweight loss in those countries, evidently, but also increases that loss in the richest countries that will have to give longer periods of protection. The first and obvious justification for this is simply to create a global patent system that includes the proportionality principal found in law in general (taxes, for instance, are a classic example, but not the only one[34]), but it may be that the world has not gotten to the stage in which such a thing is possible.[35]

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[31] STIGLITZ, *supra* note 8, at 124.

[32] EPSTEIN, *supra* note 13, at 10. "That … payment is not a *social* loss because any losses to purchasers are exactly offset by gains to the patent holder." *Id*.

[33] "Because the invention goes into the public domain at the expiration of the patent, the deadweight losses are incurred only for a limited period of time." EPSTEIN, *supra* note 13, at 11.

[34] Another scholar has proposed a classification according to the economic capacity of the various countries in the patent system in terms of maintenance fees and annuities. *See* Lester C. Thurow, *Needed: A New System of Intellectual Property Rights*, 75 HARV. BUS. REV. 94 (Sept. 1997), *available at* http://hbr.org/1997/09/needed-a-new-system-of-intellectual-property-rights/ar/5. This proportionality Thurow proposes is being applied to the international filing of patents under the Patent Cooperation Treaty (PCT). Under it, for example, citizens from certain developing countries are eligible for a 90% decrease of the PCT patent application fee (a few years prior, it was a 75% decrease). *See also PCT FAQs – Question 9*, WORLD INTELLECTUAL PROP. ORG., http://www.wipo.int/pct/en/faqs/faqs.html (last visited Nov. 19, 2014). (showing a link between the principle of proportionality and the patent system).

[35] "If the proposed corrective is introduced in the current regime of protection for inventions, the countries with better economic situation should extend the period of protection for inventions in their territorial constituencies while the poorest countries will see the periods of protection reduced. The insertion of the proportionality principle in the current regime of protection for inventions is a useful tool to correct the system taking into account the claims of both developed

I will show, through an abstract model, that a year of protection in a richer country is more benevolent for the overall global economy than a year of protection in a poorer country. Economic efficiency is, thus, another powerful argument in favor of this proposal. (Equality among contributors in relation to their economic capacity, and the increased probability of a renewed agreement around it, is probably still the most powerful argument.) This is a novel proposal, so there is no previous economic analysis to rely on. Nonetheless, the model seams to accurately describe the reality, given the assumption in which it rests.

This model addresses the issue abstractly, from an aggregate point of view. The "x" axis indicates quantity, in an abstract way. The "y" axis indicates the average prices paid for technology relative to income, i.e., relative to each country's average purchasing power. In the model I am assuming the possibility of price differentiation is not presented.. Prices relative to income paid for technology in a richer country will be on average lower than in a poorer country. The elasticity represented below could be any since no specific values are given in the "x" and "y" axis, and, more importantly, the result is always the same with whichever elasticity the demand curve could have. If two countries have the same number of habitants, and one is richer than the other, all other things equal, the exclusivity in a poorer country will produce more deadweight loss than in the richer country.[36] In the case of a higher average price paid in relation with income, less quantity would be sold. At a price "y'" (for the poorer country), the quantity will be "x'." For a lower price "y" (for the richer country), the quantity will increase at "x".

Deadweight loss for the richer country is represented by area f. Deadweight loss for the poorer country is represented by areas d, e, and f (it is always less for

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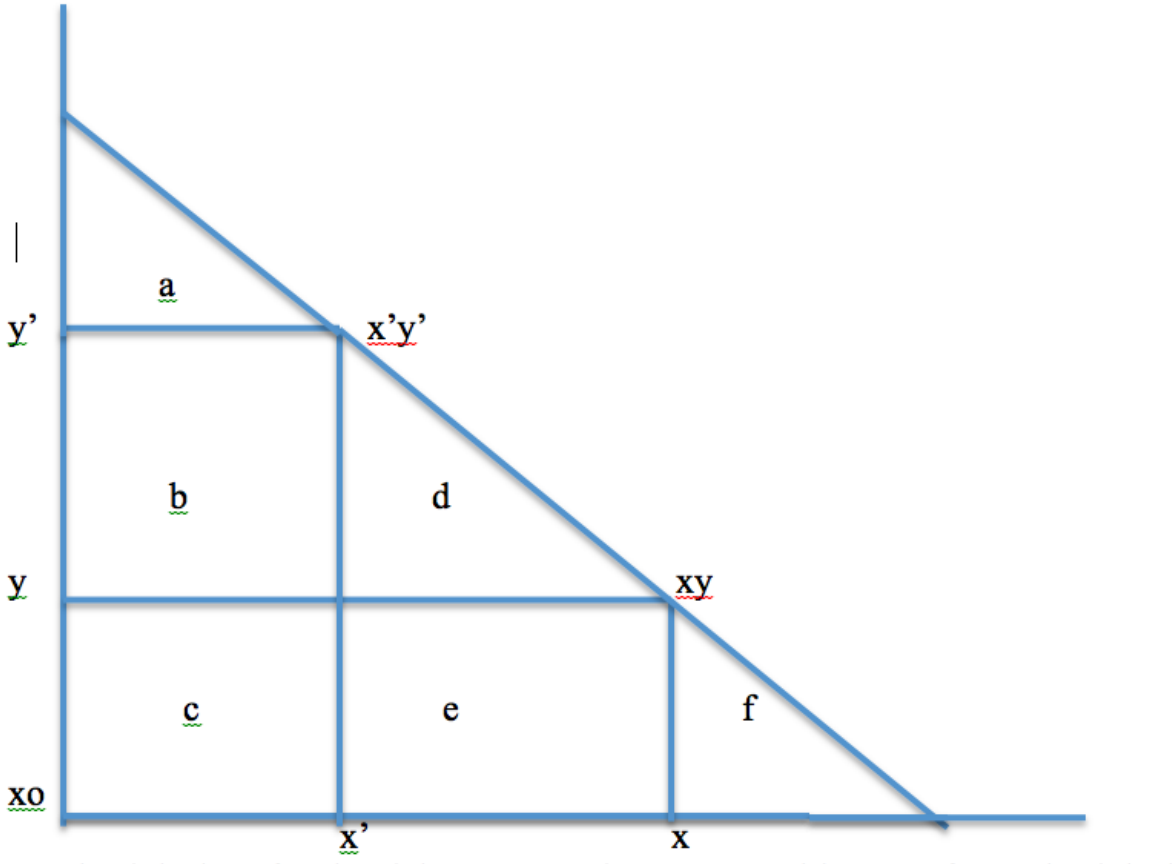
and developing countries, although the populations of developed countries will suffer more years of exclusivity than what they do nowadays and certainly more years of exclusivity than populations of developing countries. [If] more reward means more development … the key is to have that reward come in a way so that it can be afforded. That being reflected, not only would a proportional justice be achieved, but also an event of global generosity without precedent in the history of mankind would be witnessed. Hobbes's [sic] theory would be proven wrong, and cohesion of humanity would be envisioned as global. The Achilles heel of the idea presented in this book is that it maybe utopian; it would not be surprising that once again it is proven that *homo homini lupus*." DONOSO, GLOBAL SOLUTION, *supra* note 1, at 129-30.

[36] The area under the demand curve is the consumers' surplus that would exist at a competitive price of 0. Marginal cost is represented by line xo, assuming 0 cost for reproducing all patented inventions, which is obviously not true (there is always a cost, which is typically much lower that the monopolistic price). This assumption in the chart certainly serves the analysis (if not we should establish a proportion–or percentage—of the marginal cost in relation to the per capita income of each country, that will complicate the graphic unnecessarily).

the richer country). Consumer's surplus that remains is represented by area a in the case of the poorer country and areas a, b, and d in the case of the richer country. The conclusion of this model hold water for all cases in which the demand of the richer country is more inelastic than the demand of the poorer country, since the price is lower for the rich country (thus one side of the triangle that represents deadweight loss will always be shorter) and the hypotenuse (the side opposite to the right angle) will also always be shorter for the rich country (inelastic demand curve is steeper).[37] Although it is a simple and static model (it compares two countries at the same moment in time), the model determines a clear and logical tendency.



If the proportionality mechanism is weighed properly, deadweight loss effect could be diminished overall in the global economy. That is why the mechanism I present in this paper uses Gross Domestic Product (GDP) per capita as a weighing instrument. Gross Domestic Product per capita, which reflects an average income of the citizens of each country, is a good indicator of willingness to pay. There are

[37] From an aggregated point of view (demand for all technologies) the case in which the demand curve of the poorer country is more inelastic will be rarer since prices have bigger impact in persons with lower income.

other indicators, like purchasing power parity indicators, but more data is available for GDP per capita.

Moreover, for the case of essential innovations protected by patents (life saving drugs, for example), the countries with higher GDP per capita will be better equipped to provide these goods and services for their citizens that otherwise could not access them (depending in each country's policies, of course, but more GDP per capita at the very least gives margin for such a policy). From a social perspective this is huge, plus the sale will take place, limiting even more deadweight loss.

Furthermore, price discrimination and the interaction of this practice with the regime of exhaustion of rights, and the appearance of close substitutes for patented products in the market should be taken into account in order for a complete economic analysis. Up next these issues are revised in light of the proportionality proposal.

1. Close Substitutes

Both deadweight loss and reduction of consumer surplus could be more or less acute, depending on whether the patented good has a close substitute in the market.[38] "Moreover, the magnitude of the rents to inventors under a patent system is reasonably correlated with the value of an invention [] monopoly rents will be greater, as indicated, the lesser the extent to which close substitutes for the patented good exist, and the greater the degree to which consumers value it in

[38] "The initial model stipulated falsely that every patent holder enjoys *both* a legal and economic monopoly in the relevant market. Functionally, that statement means that buyers have no close substitute for the patented goods. But new entry of rival technologies, patented and unpatented, frequently undermines that assumption." EPSTEIN, *supra* note 13, at 11. Nonetheless, the cases of "me-too drugs," "follow-on drugs," or "inventing around," for instance, have been looked as an economic efficiency problem, since investment is directed where it is not needed. However, there have been examples of real technical improvements derived from these investments. "Drug companies expend huge amounts of money coming up with drugs that are similar to existing drugs but are not covered by existing patents; even though these drugs may be no better than the existing ones, the profits can be enormous." STIGLITZ, *supra* note 8, at 110. "In some cases, through better marketing, follow-on drugs have sometimes done as well or better than the original drug. For instance, Zantac was a 'me-too' anti-ulcer drug that followed on from the pathbreaking drug Tagamet (based on research that received the Nobel Prize). While some research suggests that Zantac did not, in general, outperform Tagamet, because of better marketing it out- sold it. (Its success may also be related to its having fewer side effects.)" *Id.* at 313 n.18. Consumers value functionality differences even within close substitutes. Moreover, if the market is worth it and the investment is done, this could generate technological competition, creating substitutes, that could tackle the consumer surplus issue.

excess of its cost. Those are precisely the factors that determine the value of an invention to society in general."[39] The exclusivity over inventions must be established by a general rule. It is not adjustable for each specific invention (at least as the status quo is constructed). The market will determine the economic significance of the patented product or service. The proportionality mechanism determines, in a decentralized manner, how many years of exclusivity each country should offer, taking into account its GDP per capita or other similar indicator.

My proposal does not want to change this characteristic (decentralized nature), nor its worldwide, commercially linked, and its one-size-fits-all nature. That is why, under the proposed scheme, cases where the patented invention's economic transcendence is lost or reduced due to the appearance of a close substitute on the market before the end of its term in all countries, there will not be an exact proportional reward.[40] This could be an advantage for developed countries in regard to reduction of deadweight loss (the same way that price discrimination could be an advantage in regard to reduction of deadweight loss for developing countries, as we will see up next). As times passes, the probability of a close substitute or a better technology increases. Depending on the technology field, this probability can be higher (e.g. software) or lower (e.g. pharmaceuticals), but this changes from case to case (or can even change as a trend within a given technology, i.e., a breakthrough in a given field could prompt a cascade of innovation). It is impossible to know *a priori*. The innovator assesses the investment, the rule makes no differentiation, and the market determines the outcome.

2. Price Discrimination

A different solution offered to the deadweight loss problem is price discrimination. For the system to be overall efficient price discrimination should globally work together with proportionality as it is commented in the next paragraphs. "The deadweight loss imposed by a monopolist can be mitigated, and possible eliminated, if monopolist can discriminate prices. […] Price discrimination can go a long distance toward redressing the inefficiency of deadweight loss, but is hard to implement."[41] If rules to enhance international price

[39] *See* Alan O. Sykes, *TRIPs, Pharmaceuticals, Developing Countries, and the Doha 'Solution,'* 13 (John M. Olin Program in Law & Economics, Working Paper No. 140 2002), *available at* http://chicagounbound.uchicago.edu/law_and_economics/597/.

[40] A close substitute for the patented product could appear and change the patent economic significance, any time before it expires in the country with a higher GDP per capita, which will give the longer period of exclusivity in the world within its circumscription.

[41] SCOTCHMER, *supra* note 8, at 36.

discrimination are adopted, the tendency of more deadweight loss in poorer countries in comparison with richer countries commented in previous paragraphs will be diluted. Proportionality will still be needed, though, not to correct this focus of inefficiency, but to make the system more just (an objective on its own, which could *per se* lead to all the positive things that are mentioned in this paper, as enabling agreements on better enforcement, opening more room for further harmonization, etc.).[42] If such a change is not possible and international price discrimination continues to be limited, proportionality is even more necessary for the overall efficiency of the system.

Price discrimination consists simply in charging a different price for the same product to different consumers. This can be done in a local/national market, as well as in the international market. Its application in the local market is very complicated due to arbitrage practices (purchasing and selling the same good to take advantage of a price difference), but it certainly can be implemented for some products. This practice in the local/national markets, when applicable (which will depend on the nature of the product), contributes to increase the efficiency of the system by reducing deadweight loss (at the same time it reduces consumer surplus).[43]

Moreover, if price discrimination could be done in the international markets, deadweight loss could be reduced enormously.[44] Taking on account the model

[42] The proportionality system presented in this paper aims to correct the fact that the scheme is currently imposing charges in an inequitable way to all contributors, thus creating resistance to the structure itself and ultimately hindering innovation. Even if price discrimination could be enabled, proportionality is needed. The overall purchasing power differences (the economic differences among countries) will still remain in the presence of price discrimination.

[43] The implementation of price discrimination is hard to instrument in local markets. "Our simplified model assumes that the patent holder charges all users an identical price, even if each has a different reservation price. But sometimes a patent holder knows enough about his customers to charge different prices to different classes of users. If the patentee knew the reservation price for each potential buyer, it could sell each buyer just the quantity it needed for a price just below that reservation price. That strategy, if it could be implemented, would eliminate all the deadweight loss (and, of course, any consumer surplus). […] Apart from any distributional concerns, the total output would equal that under pure competition. In practice, any metering device is likely to be imperfect, as when the sale of toner is used to monitor price differences for printing devices [he cites an example on this regard]. But the overall tendency is still clear". EPSTEIN, *supra* note 13, at 11.

[44] Parallel imports means foreign trade could be done outside the official network. This could be very problematic in the pharmaceutical field. Many countries subsidize pharmaceutical products or bargain special prices with drug manufacturers through their public social care provider. Nonetheless, regulated markets, like medicines, seem to be less vulnerable to circumvention. "There are already huge price differences around the world, and only limited

presented a few paragraphs back, if the patent holder choose to apply price discrimination among different countries taking on account their different purchasing power (charging more in one country than in another), there would not be a difference in price relative to income between the two countries. If international arbitrage is prohibited (the exhaustion regime will determine this), the patent holder could take into account the reality of each country, and set a price that is nominally different but the same in consideration to the purchasing power of each country. Because the "y" axis indicates the average prices paid for technology relative to income (i.e., relative to each country's average purchasing power), if the patent holder chooses to set prices in relation to the economic capacity of each country, the deadweight loss will be the same for both countries. The tendency of more deadweight loss (and restricted access to innovation) that I argue exist in developing countries in relationship to developed countries will cease to hold water.

There are three aspects that must be taken on account in order to properly assess price discrimination in international trade. The first one comes from the essence of intellectual property rights. It is the right of the patent holder to set prices as she wishes with out facing competition (constrained only by market forces, for example, the appearance of a close substitute in the market). The other two are exogenous factors that must be taken on account by the patent holder to make its free decision: smuggling, and the scheme of exhaustion of intellectual property rights chosen by each country. The former is an issue of enforcement. The latter is the regulation choice that each country has to make. [45]

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circumvention, largely because this is a highly regulated industry [the pharmaceutical industry], with imports tightly controlled, and with most purchases paid by third parties." STIGLITZ, *supra* note 8, at 315.

[45] The developing countries are identified with the theory of international exhaustion, while developed countries have usually established in their legislation regional (European Union) or national exhaustion (with the exception of Japan that generally uses international exhaustion, with a caveat regarding grey market products in which contractual restrictions on importation may apply). "In Japan Tokyo High Court (in 1995) applyed the international exhaustion rule (BBS Kraftfahrzeug Technik AG v. Kabushiki Kaisha Racimex Japan and Kabushiki Kaisha JapAuto Prods). The sentence turned over the *leading case* Brunswick (1969, Osaka District Court). According to the Brunswick *case* parallel importation was unlawful if goods were already patented in Japan. Finally, in 1997, the Japanese Supreme Court didn't use the international exhaustion principle, and decided that holder of a patent in Japan and in another country can't oppose to importation in Japan of the same product, except demonstrating that the grey market was contractually prohibited (and there was evidence on the product). […] In the E.U. is in force the European Union exhaustion principle. Goods patented (or marked) traded for the first time in the European Union or in the European Economic Area can be freely traded

The freedom that the patent holder has to set prices means that price differentiation is a possibility, but not necessarily the unequivocal practice. Patents confer its owner exclusivity in the market. In that sense the holder could set whatever price she likes without taking on account competition. If acting rationally, she will set the price that will yield the higher profit. A higher price not necessarily results in profit maximization, if by it the patent holder excludes too many consumers. Conversely, more sales due to low prices not necessarily result in profit maximization either, if the price is to low. The optimal price, with profit maximization in mind, will depend on each product and each market. A patent holder will settle with a combination of price and quantity which yields the bigger profit, taking on account its distribution capacity, the type of consumer (e.g. a firm could have a commercial strategy that comprises establishing a "high end" status for its products), the elasticity of the demand for that product, among many other factors.

Moreover the patent holder faces his own product's competition in a given market, sort to speak, if parallel imports are permitted in that country (if the country has established a international exhaustion of rights regime, as permitted by the TRIPS Agreement).[46] In this case, the application of price discrimination by the patent holder is limited. [47] Lets assume, as economist tent to do to allow analysis,

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inside European Union […] U.S. Government, instead, has been always adverse international exhaustion. During the negotiations of TRIPS agreement U.S. Government expressed his contrary view (with reference to patents and specially drugs). The U.S. Government opinion is founded on the need to defend the research' possibility of enterprises that want to patent their inventions. Prof. V. Di Cataldo, Parallel importations, New perspectives, available at http://www.google.com.ec/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CB8QFjAA&url=http%3A%2F%2Fwww.wipo.int%2Fedocs%2Fmdocs%2Fsme%2Fen%2Fwipo_smes_rom_09%2Fwipo_smes_rom_09_workshop12_3.doc&ei=qi6UVOrbIYSR8QWtw4D4CQ&usg=AFQjCNEfsdHMTrZCaBl8K5VpLxv4I3qgOA&sig2=93Kaqpsz84Lr3kGBWl6Rgw&bvm=bv.82001339,d.dGc

[46] The theory of exhaustion of rights is universally accepted. In regard with the scope of its application (the limit of its impact), whether territorial, regional, or international, different conceptions have been established. According to the conception chosen by each country, foreign trade acts that are allowed will be determined. If the limit of the exhaustion is territorial, any export/import of a patented product or a product produced by a patented process can be made only with the consent of the patent owner, as part of an official network. On the other hand, if applying the principle of international exhaustion, acts of foreign trade of the product of a patent may be made by anyone who has lawfully acquired a patented product. Hence, the application of the international exhaustion of rights paradigm is known with the term parallel imports.

[47] Moreover, territorial or regional exhaustion prevents competition that could arise between the patent owner and licensee, thus keeping intact the exclusive exploitation rights of the first. Otherwise licensees (or even those who legitimately purchased the product) could export the licensed product to the country of origin of the patent holder. This could mean that the patent

that there is proper customs enforcement, no tariffs, zero transportation cost, no transactional costs, and that the patent holder decided to set an international price discrimination strategy that takes on account countries' purchasing power. The market of the richest country among those that have chosen international exhaustion (country x) will set the price for patented products for all countries that are poorer that this one (countries y, z), regardless if they chose international exhaustion or not. Since anyone could purchase the product anywhere in the world and legitimately introduce it to that market of country x, if the price is lower in countries y or z many could take advantage of importing the good into country x. With profit maximization in mind, the patent holder would not set different prices. She would have to set an international strategy that, as a tendency, will generate more deadweight loss and less access to the products in poorer countries.

The obvious solution is to set national exhaustion or regional exhaustion (like the European market) as the international global standard. [48] This has been suggested in many occasions, but such an agreement has not been possible, because negotiations are currently blocked.[49] Developing countries, which could benefit from such a change, are probably suspicious of the system. In one hand they worry that if they set national exhaustion, their markets will be undersupplied, which could be address with proper regulation. In the other hand, they repudiate

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holder has to compete freely in the market for a product on which he supposed to have exclusivity. For these reasons, it seems wise to establish a system of territorial or regional exhaustion. As all the conclusions in this publication, this recommendation is in order provided that the corrective this paper urges comes to be established. Proportionality is the answer for a global, effective, and just system.

[48] Article 6 of the TRIPS Agreement, despite its confusing wording, leaves the definition of the exhaustion system to the discretion of the different countries. In the absence of a consensus in 1994, the TRIPS Agreement gave countries freedom in regard to this determination in strict respect of the principles of National-Treatment and Most-Favoured-Nation. It is noteworthy that the exhaustion of intellectual property rights is an issue that applies to all intellectual property rights in general and not only for patents, which makes its impact even greater. The suggestions here stated are meant for the case of patents. The subject under discussion is not the right of the holder of a patent to import his product (importation is considered exploitation) or the theory of exhaustion of rights (universally accepted). What has been discussed is the limit of the application of the exhaustion paradigm.

[49] "If trading nations as a whole ban parallel imports, pharmaceutical patentholders should be willing to sell their products at a low price to nations where customers cannot afford to pay much for them as long as that price covers the marginal cost of making the drug and delivering it. They will be willing to do so because each sale yields some profit, and they need not fear that their low-priced sales in one market will be re- exported to undercut their prices elsewhere. When parallel imports are possible, by contrast, they will likely become unwilling to sell at low prices in markets where demand is weak. Poorer countries may then find themselves largely priced out of the market for particular medications." Sykes, *supra* note 43, at 20.

the idea (almost as a dogmatic believe) of any more power advantages for the patent holder (poor countries are reluctant to trust in the market and it effect on individual decisions; that the patent holder could practice price discrimination under national or regional exhaustion does not necessarily means she will do it). Price discrimination could certainly be an advantage for the patent holder (more sales could occur and, if well applied, it could lead to profit maximization, that will entail more incentive for innovation), but also and more importantly the overall system will be more efficient. Less deadweight loss and more access could be secured for populations in developing countries. Maybe the only way to change the attitude of the developing world towards patent protection is to renew the justice of the global scheme. Proportionality could lead the way.

In the case of territorial or regional exhaustion, the patent holder will have more control over the international market of her product, while in the international exhaustion case this control will be diluted. A greater control implies more economic rights for the holder of the patent, but it should also imply more responsibility toward consumers.[50] The proportionality proposal goes together with making territorial or regional exhaustion the global standard to achieve a more efficient system, but it could go even further. Until the patent expires in the very last country (the richest, in GDP per capita), the patent holder should be entitled to know who is using, producing and selling his product elsewhere (where the patent is part now of the public domain).[51] This is not an unequivocally necessary change for the proportional system to work, but it could enhance it.

Lastly, currently patent holders face competition of counterfeited products. If someone infringing the patent produces in a given market a product protected by a patent, there is an unlawful dilution of the monopolistic power. It will also be unlawful if the product is smuggled into the market, even though the product could

[50] If there is an official network with the capacity to control the acts of foreign trade, the global distribution of the patented product will be done through licensing or self-representation. A product that is introduced as a result of a license or direct sale will better ensure consumer rights. It will mean there will be a local agent or representative of the patent holder, who could respond for the quality of the products.

[51] Paired with this information privilege, as a two ways road, the patent holder should inform the markets she is not attending. It is essential not to have any markets underserved by lack of interest of the patent holder. The information right or responsibility should be bestowed in all international producers alike, not only patent holders. If a given product is found at a market is not supposed to be found, corrections could then be prompted, or eventually sanctions against the producer could be established. It will be easier to control piracy and borders. This will be an important step toward a decentralized control system, which could aid governmental efforts at customs; a necessary step to enforce the varied patent periods between nations.

be legitimately produced elsewhere (where the product is not patented or the patent has expired). Parallel imports generate competition for the patent holder with the patent holder's own product, thus eliminating the possibility of price discrimination. Smuggling and counterfeiting is a problem of a different nature. It is an enforcement problem, and not a regulatory problem. In strict sense, this problem is not going to be worsened or alleviated by the proportionality proposal.[52] Both a counterfeited and a smuggled product (even though produced legitimately elsewhere) will be unlawful in the jurisdiction where the patent is still enforceable. The solution in both cases is to have better custom control.

B. The Proportionality Mechanism

Some have proposed making the system less than universal as a potential solution.[53] This proposal results in a line drawing problem: which countries will be part of the reward?[54] Both politically and economically (and logically), it makes much more sense to have a proportional reward system.[55]

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[52] One may argue that under the proportionality proposal there will be more cases of smuggling since there will be more products to smuggle available. It all is reduced to custom control, though. This is a key aspect of international trade, which not only pertains patents or intellectual property (efforts of a better customs system will be beneficial in many aspects, and they sure should continue).

[53] *See* STIGLITZ, *supra* note 8, at 120, "One of the simplest ways for the developed countries to help developing countries is to 'waive' the tax, allowing them to use the intellectual property for their own citizens, so that their citizens can obtain the drug at cost. Critics might say: But then the developing countries are simply freeriding on the advanced industrial countries. To which the answer is: Yes, and they should. There is no additional cost imposed on the developed countries." In the same line of thought, one interesting economic analysis has concluded that "under specified circumstances it is not optimal to extend patent protection to all countries of the world." Alan V. Deardorff, *Welfare Effects of Global Patent Protection*, 59 ECONOMICA 35, 48 (1992). Based on his analysis, Deardorff argues that "extending this protection to other countries is very likely to be harmful to them, in spite of the fact that they will benefit from increased inventive activity…. a case can be made, in terms of world welfare, for limiting the coverage of a patent protection to less than the entire world." *Id.* at 36. Ultimately, his research demonstrates that "the case for universal patent protection is not a clear one … and the concerns of some developing countries that they will be exploited by patent protection are not without foundation." *Id.* This happens with the LDCs, which are exempted from the application of the TRIPS agreement provision (which does not give 20 years patents).

[54] There are currently 48 least-developed countries (LDCs) on the UN list (*see* http://www.un.org/en/development/desa/policy/cdp/ldc/ldc_list.pdf), 34 of which to date have become WTO members, that do not apply the 20 year TRIPS' provisions. "WTO recognizes as least-developed countries … those countries which have been designated as such by the United Nations…. There are no WTO definitions of "developed" or "developing" countries. Developing countries in the WTO are designated on the basis of self-selection although this is not necessarily

It is a contradiction that people in Canada- as an example of a developed country with an annual income of US$51,000 per capita- abide the existence of a legal monopoly of twenty years the same way as the people of Ecuador, a country with an income of less than US$6,000 per capita (2013 data).[56] Just by stating the above, the inadequate treatment of the regulation is revealed. By applying the proportionality mechanism to this situation, other aspects for the protection of inventions may be analyzed. If reward means technological development or even if it does not, it will be correct for humankind to assume the cost proportionally to each country's capacity.

The reward to innovators is set in years of exclusivity. This proposal entails maintaining the innovators' current reward unaffected. This could be done only if the reward that innovators lose in one country due to a shorter period is compensated by a longer period in another country. To accomplish this, the way to establish proportionality should be creative.[57] First, it is important to establish a measure of the potential revenue that the world as a whole is currently offering

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automatically accepted in all WTO bodies." *Understanding the WTO – Least Developed Countries*, WTO, http://www.wto.org/english/thewto_e/whatis_e/tif_e/org7_e.htm (last visited Oct. 10, 2014).

[55] A recent empirical analysis on China's patent applications at the U.S. Patent Office shows a trend that is common to those countries that have walked the path to development. Jay P. Kesan, Alan C. Marco & Richard Miller, *Patenting — With Chinese Characteristics* (Univ. Ill. Coll. Law, Working Paper Series July 22, 2014), *available at* http://ssrn.com/abstract=2469957. This study shows that Japan and South Korea's increase in technological innovation is correlated with their development status (as well as benefits to their population). China is now following their footsteps. Brazil, India and others are, in a lesser way, following that path, but in a slower manner. From this kind of empirical analysis it seems that the world should continue to reward innovation, helping others to develop. India is an interesting case. There is a lot of innovative activity, but the mass of its population is extremely poor (in some years it has a per capita income smaller than many countries in the LDC list). It will enhance their chances of development if their inventions could get proper reward from the world, while their population rewards according to their capacity to do so (for instance, one of Hinduism's main celebrations, Diwali, praises light and knowledge). Countries must contribute according to their capacity, but they should not stop contributing to the overall global retribution. This is not only because they have the aspiration to develop, but also because it will be correct for them to legitimately benefit from technological progress by contributing according to their capacity.

[56] *Data: GDP Per Capita*, WORLD BANK, http://data.worldbank.org/indicator/NY.GDP.PCAP.CD (last visited Sept. 27, 2014) (data is in current U.S. dollars).

[57] In taxes to establish the measure of contribution of each citizen, there are many alternatives, (*e.g.*, a distributive agenda, to promote investment, etc.). This paper does not seek to provide unequivocal answers. I will just try to provide a mechanism in order for this proposal to be feasible. Of course there will be many alternatives.

innovators (no measure could be uncontested). I have chosen GDP to reflect potential revenue in the mechanism.[58]

Once I settled on a measure of reward (GDP), I have applied it to assess the status quo, which is 20 years of reward for every country (WTO countries that are not in the Least Developed Country list). This is the World's GDP multiplied by the world's reward (20 years). This is the **World's Current Reward.** This amount will have to render the same result under the proposed mechanism, in order for it to be neutral in regard to the status quo. Then, I calculated the current percentage each country gives under the TRIPS's 20 years reward with regard to the World's Current Reward.

I then used a very basic formula to establish the proportional reward that countries should give toward innovation, measured in years of exclusivity. First, for the developing countries (as categorized in accordance with this proposal), the reward will be as so:

X= (GDP per capita of each country x 20) / World's GDP per capita

Next, I assigned the result to all countries that, according to the calculation, will have to give less than 20 years of exclusivity, until the result reaches as low as 7 years.[59] Thus, 7 will be the least any country will give (this is a arbitrary determination; a new minimum should be agreed in the international arena).[60] I

[58] The economic significance of each invention, as we have seen, depends on many factors. No invention will have the same reward as any other. Nonetheless, they all have a market from which they can extract their reward. A measure of the potential revenue must be established accordingly. I have used GDP per capita to establish the proportional reward, in order to take into account a variable that influences willingness to pay (as discussed in the previous segment). Many other variables could have been used, and no measure will be uncontested.

[59] This could be too little, especially for pharmaceutical products. According to the Pharmaceutical Research & Manufacturers of America ("PhRMA"), an organization representing biopharmaceutical researchers and biotechnology companies, the "the clinical trials process occurs in several phases and takes on average six to seven years." *What Are Clinical Trials?*, PHRMA, http://www.phrma.org/innovation/clinical-trials#sthash.Jq3QCHj8.dpuf (last visited Nov. 5, 2014). It is an arbitrary determination. To start to compute the patent time from the moment of the first sale could be a proper solution. This is not part of the status quo, so it is presented as a simple annotation. As suggested in the conclusion, the solution to the problem of neglected diseases (those that are of primary concern to developing countries) could be to generate enough reward and legal certainty to attract investment toward researching new treatment options.

[60] I have chosen this mark, because around it LDCs start to appear when applying the formula to the database. And not only Equatorial Guinea and Vanuato, who are graduating (*see* note 64, *infra*), but other LDCs that are doing a little bit better than some that are not in that

then multiplied the GDP of these countries (all that will give less than 20 years) by the number of years of their new reward according to this formula. This, of course, renders a lower amount in comparison to what they gave applying 20 years. This number is the **Developing World's Proposed Reward**. The difference is distributed among the richest countries.

Thus, the **Developed World's Proposed Reward** is determined by distributing the percentage in which the reward should increase in order to cover the damages produced by the application of the proposal to developing countries. These countries carry the same "burden" regardless of their economic condition, because the additional length is directly proportional to their wealth. The damages to innovators from the application of the proposal in developing countries, is the exact amount they recoup by longer periods among the developed countries. Thus, the **World's Proposed Reward** is exactly the same as the **World's Current Reward**.

It is important to recount some basic information of the statistical work I have done in order to obtain the results presented in this paper.[61] The figures calculated use data made available from 1960 to 2013.[62] I have established which

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category (of course, at the end of the list most of the LDCs are piled up with what will be, according to the formula's result, no more than 3 or 4 years of reward, which could go down to less than one year of reward). It is, in any case, an arbitrary determination. Although there are reasons to have such a minimum from the perspective of the producers, the real reason I have chosen to establish this minimum is to tackle the tropical disease and orphan diseases problem, as is discussed at the conclusion of this paper (this is based on the contested assumption that reward spurs innovation). From the producer's perspective, it seem prudent to establish a minimum, since administrative procedures can create long delays before a patent is granted, and because to put a product in the market can also take considerable time (especially for drugs). Something that would be desirable from the producers' point of view is that periods begin to count from the patent grant and not from the filing (as it is now), or even from the first sale (in this eventual system, such a provision could be analyzed, weighing the economic benefits and the patent term). If the duration of the exclusive rights is computed from the administrative decision granting the protection or even with the first sale, certain problems would be avoided (the reward could be really assessed, the data exclusivity issue over clinical trials could be properly evaluated, and unjustified delays in granting a patent would be avoided). Provided the application of a scheme as the one proposed in this paper, this could be considered (it could be weighed when analyzing the optimal patent duration).

[61] *See* Daniel L. Rubinfeld, *Reference Guide on Multiple Regression*, *in* REFERENCE MANUAL ON SCI. EVID. 303, 332 (3d ed., Fed. Judicial Ctr. 2011), *available at* http://www.fjc.gov/public/pdf.nsf/lookup/SciMan3D01.pdf/$file/SciMan3D01.pdf.

[62] *Data: GDP Per Capita*, *supra* note 56. There is no GDP data for Myanmar, Somalia (from 1991 thereon), or San Marino (none of which are WTO members), no GDP data for Nauru and the Holy See, and no GDP per capita data for Democratic Republic of Korea (which is also not a

countries are members of the WTO, which are members of the European Union, and which have the LDC category, and the dates of entrance, from the WTO, EU and UN web pages.[63] The results presented in this paper range from 2004 to 2013.[64] The formula was applied to all the countries in the world (no samples used).[65]

WTO member). There are some other countries which are missing data from 2007, 2008, and thereon (*e.g.*, Andorra and Syria, which are also not WTO members). China is considered separately from Macao and Hong Kong.

[63] For a list of countries belonging to the European Union, *see EU Member Countries*, EUROPEAN COMM'N, http://europa.eu/about-eu/countries/member-countries/ (last visited Dec. 15, 2014).

[64] The data used for the calculations takes in account the date of entrance to the WTO of each country, and if countries are in the LDCs list (the date of entrance to this list is also considered). For European Union countries, when considered together for the calculations, the year of entrance to the union is also taken in account. This made it possible to obtain a result for different years and to make that result reliable. **NOTE:** The general transition periods explained next were not taken into account, since the figures and charts I present in this paper are based in the 2002-2012 time frame (not all countries used the transitional period to the fullest, so to do so would have required an arduous country-by-country analysis). For the 2002-2012 time frame, the following general transition periods have already expired (for developed and developing countries), while the exceptions for the LDCs are still in place. The implementation of the TRIPS Agreement in the different countries was not immediate in all cases, being gradual for developing countries and LDCs. These are categories included by the TRIPS Agreement, according to the developed condition of the member country based on articles 65 and 66 of the TRIPS Agreement. For all developed countries it was applied since January 1, 1996, but many applied it since 1995. Meanwhile, under the transitional provisions of the agreement, the developing countries were required to comply with the TRIPS Agreement from January 1, 2000, and even LDCs had an additional period of six years. Efforts have provided greater flexibility for LDCs with some concrete results. The decision of the Council for TRIPS of June 2002 established the extension of the transition period under article 66.1 of the TRIPS Agreement for least-developed country members until January 1, 2016, for certain obligations with respect to pharmaceutical products. Decision of the Council for TRIPS of November 2005, which established the extension of the transition period under article 66.1, by which LDC members shall not be required to apply the provisions of the agreement other than articles 3, 4, and 5 until July 1 2013. Just a few months ago came the decision of the Council for TRIPS of June 2013, which extended the transition period previously mentioned, until July 1, 2021. In both of the previously mentioned decisions, the extension period will only apply until the member cease to be an LDC. I have also chosen not to take into account those countries that joined the WTO after 1995, which have their particular transition periods, because their impact is negligible (as discussed in the following footnote).

[65] Particular transition periods and LDC list inclusions: Up next I present particular transition periods scenarios (sometimes related to the LDC status, thus already considered), which are meant as an annotation to this work. The Russian Federation, which recently joined the WTO (2012), would fully apply the provisions of TRIPs, including provisions for enforcement, without

Truthfully, many issues could arise regarding this mechanism, making it unwise to present it as unequivocal. This is a modest approach by which I have attempted to prove that proportionality could render a feasible result. It clearly does (see the chart and graphic at the end of this paper). A feasible result could also be achieved with the application of different indicators, as well as with different rules.[66]

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recourse to any transitional period. *See Working Party Seals the Deal on Russia's Membership Negotiations*, WTO (Nov. 10, 2011), http://www.wto.org/english/news_e/news11_e/acc_rus_10nov11_e.htm. A similar situation is presented by the Ukraine, which joined in 2008. *See Trade Related Intellectual Property Regime*, WTO, http://ecampus.wto.org/admin/files/ACC/E/M3/Comm/trips/trips.pdf (last visited Oct. 20, 2014) [hereinafter, "*TRIPs Regime*"], at 9-10. Additionally, Cambodia (2004), Nepal (2004), Lao (2013), and Yemen (2014), which recently joined the WTO (their years of entrance where annotated in parenthesis), are on the list LDCs; of course are given the exception to the application of the TRIPS described in this footnote. Another example is Cape Verde, which graduated as an LDC in 2007 and became part of the WTO in 2008. *See UN Advocate Salutes Cape Verde's Graduation*, UN NEWS CENTRE (Jun. 14, 2007), http://www.un.org/apps/news/story.asp?NewsID=22918&Cr=cape&Cr1=verde. A special transition period was agreed upon for Cape Verde: "The representative of Cape Verde confirmed that Cape Verde would apply the Agreement on Trade Related Intellectual Property Rights by no later than January 1, 2013 according to the action plan in Table 12 with the understanding that for the obligations covered by Sections 5 and 7 of Part II of the TRIPS Agreement or to enforce rights provided for under these Sections, Cape Verde would apply the TRIPS Agreement in respect of these obligations no later than January 1, 2016, in light of paragraph 7 of the Doha Declaration on the TRIPS Agreement and Public Health." *TRIPs Regime, supra*, at 8. Such provisions have been agreed upon for other countries as well, such as Tajikistan, Montenegro and the Maldives (which entered the WTO 1995 and graduated from the LDC list on 2011). The Maldives became the third and last country to graduate and be promoted to developing country status (January 1, 2011). Samoa was suppose to graduate on December 31, 2010, but due to the tsunami catastrophe of 2009, its graduations was deferred until January 2014 (General Assembly resolutions A/RES/59/209, A/RES/62/97 and A/RES/64/295. *LDC Factsheet, Samoa*, UN DESA, http://www.un.org/en/development/desa/policy/cdp/ldc/profile/country_164.shtml (last visited Oct. 20, 2014). These cases are simple not considered in the calculations, as their impact is negligible.

[66] For instance, the LDCs are not considered (the status quo excludes them). If you do include them (part of the proposal is that these countries should give a reward to tackle the orphan diseases issue, as commented in the conclusion of this paper), the difference is negligible in terms of the big picture (the total contribution from LDCs will be less than 0.4% of the total reward). The case of Equatorial Guinea is a peculiar one. Even though it is still an LDC, Equatorial Guinea now has a GDP per capita that puts it in the developed group (it is a special case). Equatorial Guinea recently discovered oil and gas reserves, and thus their per capita GDP rose enormously, to levels that situate it as a developed country. *See Data: Equitorial Guinea*, WORLD BANK, http://data.worldbank.org/country/equatorial-guinea (last visited Dec. 15, 2014). However, they are still on the LDC list. General Assembly resolution 68/L.20, adopted on

C. Expected Consequences of the Proportional System and Technical Details of the Mechanism[67]

In the hypothetical system proposed, any holder of a patent shall have the same term of protection worldwide as any other holder of a patent in a subscribing country, regardless of their nationality or the field of technology of the invention. Thus, this proposal is in strict compliance with the theories of National-Treatment and Most-Favored-Nation principles of the WTO. However, "the duration of their rights will vary from country to country, according to the economic capacity of each country."[68]

Given that the determination of the term of protection a patent is granted would be in relation to a variable factor (GDP per capita), this grant may vary over time. As a result, the frequency of revisions is a matter to be determined under consensus. In the proposed scheme the term each country offers varies automatically every year.[69]

Such flexibility would be a great contribution to the system. The nations of the world could undergo economic crises for various reasons. As such, any country could benefit over the course of history with this hypothetical system (coherent with an axiological perspective), given that in a crisis scenario their inhabitants would see decreases in the period of exclusivity granted to patented inventions in their territory. This kind of solidarity undoubtedly could have a positive impact on the cohesion of humanity. If a country benefits from short-term protection, it will be because it is passing through a bad economic situation. If the struggles are

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December 4, 2013, decided that Equatorial Guinea will graduate three and a half years after the adoption of the resolution, and that Vanuatu will graduate four years after the adoption of the resolution. Vanuatu, in contrast, is an example of a country who has seen a far more gradual improvement of their economy. Vanuatu is also an interesting case, though, for other reasons. It recently joined the WTO and is scheduled for graduation. Some think it got a better treatment that some previous members. "Vanuatu was allowed two years to adopt [TRIPS], while Cambodia and Nepal were allowed three years or more." Daniel Gay, *Vanuatu's Suspended Accession Bid: Second Thoughts?*, MANAGING THE CHALLENGES OF WTO PARTICIPATION: CASE STUDY 43, WTO (2005), at n.40, http://www.wto.org/english/res_e/booksp_e/casestudies_e/case43_e.htm (last visited Oct. 20, 2014).

[67] For a more detailed overview, *see* DONOSO, GLOBAL SOLUTION, *supra* note 1, at 81-107.

[68] *Id.* at 83.

[69] *Id.* at 91. The availability of data probably will entail that the term of protection for a given year is determined by data of previous years. In the case of my analysis, 2012 has most of the data for every country. From then on the World Bank page does not provide complete information in its webpage.

resolved and the country improves its economic condition, it would then be in a position to contribute more to the technological progress of humanity. "Consequently the exclusivity period that this country grants to patent holders in its territory [would] be extended."[70]

This flexibility may also bring some practical complications that must be overcome with specific regulations.[71] There may be situations in which a patent that had expired under a previous exclusivity period would be in a position to recover its availability (or vice versa), which could in turn affect third parties. For example, the ones using or preparing to use an innovation that just became part of the public domain, or those who pay for a license in advance over a patent that is no longer available. In the first case, it seems prudent that if a patent became part of the public domain, it will not recover its availability (this could create some distortions that will run against inventors). The proposal contemplates fractions of a year for the periods of protections, so distortion could be reduced. In the second case, if the fact justifying a license disappears, the contractual obligations of this license will likewise disappear. The proportional system's implementation will certainly bring these kinds of difficulties.[72]

An additional positive consequence of the proportionality system could be to achieve technological transfers to the poorest countries.[73] A real and effective

[70] *Id.* at 92.

[71] "In any case, it can be said that once the term of protection that a country is required to provide is known (which may vary according to the frequency in which the reviews are determined by the rule), the status of a particular patent will be known (if the patent is enforceable or if it has become of public use in that particular country)." *Id.*

[72] *Id.*

[73] "[T]echnology transfer is an objective that the current regime has failed to achieve. Even though technology transfer is a value referred to in the statement of principles and objectives of the TRIPS Agreement, this goal is not met in a complete way by the current regime. It has even been argued [by some of the most forceful critics] that the currently conceived system perpetuates the differences or the technology gap between the developed and developing countries, ensuring access to the system only by the powerful... The tools that the agreement foresees to ensure the goal of technology transfer have proven to be ineffective. For example, article 66 of the TRIPS Agreement determines that developed members shall provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging technology transfer to least-developed countries (this is a category established by the TRIPS Agreement), to enable them to create a solid and viable technology base.… As a result of this, so far the principle of technology transfer has been merely declaratory, except for certain programs conducted by some industrialized countries to support other less fortunate ones. From the perspective of developed countries—if this hypothetical system came to be implemented—the resources destined to these programs (those of article 66 of TRIPS) could be better used to increase their own poor populations' access to new technologies, especially regarding health.

transfer of technology to those who need it the most could be achieved, under the principle of proportionality in conjunction with the global principle of free movement of the goods protected by intellectual property rights and recognized by the TRIPS Agreement. With the introduction of proportionality into the current system, the transfer of technology could stop being subject to the charity of the technological owner alone. This has not solved the technology gap. With the proposed system, the period of protection in the poorest countries will be shorter, so free competition could encourage local as well as multinational enterprises to set up technological business in these countries. Moreover, in the place where an intellectual activity occurs, it is effectively transferred, thus ensuring that the disclosure meets its real goal—positive impact on the body of knowledge for mankind. Under this hypothetical scenario, the global free market could attract industries to these countries in which new inventions could be exploited freely.[74]

The discontent with the system of protection of inventions has even gone to the point that Thurow has asserted that the path to development is in disrespecting intellectual property rights: "copying to catch up is the only way to catch up. Every country that has caught up has done it by copying. Third World countries know that unless they can acquire the necessary knowledge, they will never make it into the First World. They cannot afford to buy what they need–even if those who have the knowledge were willing to sell, and they are not. So they have to copy."[75] In the light of proportionality, the discontent will not have to be resolved by cheating.

In accordance with the principle of the TRIPS Agreement under which the importation of a product is considered an exploitation of the same, competitors in a given industry could be interested in establishing their presence in the poorest countries to advance efforts to produce technology released earlier under this system. Eventually they could export to the rest of the world, waiting for the gradual release of the patent worldwide. Everyone could produce freely (in that particular market) the new advancements of humankind, thus supplying that market first and then exporting from it to other countries when the patent term has

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Technology transfer, as it is established, is a rule that aims to capture an important goal, but because of its poor axiological content (justice), it has become a mere romantic statement." *Id.* at 95-98 (internal citations omitted). "If the proposed scheme came to be implemented, in which the exclusive exploitation of new technologies will last longer in the circumscriptions of developed counties, it is probable that the governments of those countries would chose to destine resources to aloud [sic] their less privileged population to have access to new technologies, especially when it comes to medicines. Resources could be those of article 66 of TRIPS." *Id.* at 98 n.70.

[74] This is true only for that market, and those where the patent has expired; the key for this system to work properly is tight international trade control of protected products. *Id.* at 97-99.

[75] Thurow, *supra* note 36.

expired. The proposal contained in this study could help to establish a real technological transfer system, fulfilling a basic objective of the patent system. If this proposal comes to be implemented, in order for it to work optimally, a territorial (as opposed to international) exhaustion system should be established as the global standard.

CONCLUSION

I started this paper with a statement: to completely change the system is an unrealistic dream. Although the malleable nature of intellectual property conceptually permits it, the strong status quo precludes it. Thus, I focused the analysis only in the introduction of proportionality into the current system.[76] Nonetheless, if the world could agree to apply a mechanism like the one proposed in this paper (or any other that render a proportional reward), maybe we can dream again. I believe that a major reform could be constructed around proportionality.

Scholars have addressed many issues of the system of invention protection, and clever solutions have been proposed that should be taken into consideration if a proportional reward opens the way to further consensus.[77] I will indulge myself by stating only two ideas in this conclusion, of the many possible additional reforms that could be envisioned after proportionality. The first relates to a concrete alarming deficiency of the current system: orphan or neglected diseases.

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[76] In that sense, the last few paragraphs of segment III a addressing the exhaustion of rights, as well as a couple of footnotes throughout the article, tackled issues that were set outside the scope of this paper.

[77] For instance, to address the issue of patent thickets (an issue classically addressed by patent pools), some have called for a scheme where, for the case of technologies in which patents have proliferated (and thus created the thicket), preliminary injunctions are not used to prevent infringements (only to preserve evidence). This will create a system in which infringements are compensated after the fact, but the use of the technology is not hindered. For example, a proposal by Ecuador was presented in 2013 to the Council for the TRIPS, seeking technological transfer of "eco-technologies" by establishing exceptions and limits to the protection of such inventions. Although well intentioned, the proposed solution is incorrect. Less retribution for this kind of technology means less investment in research and development (and unequal share of the mistake among countries, in the case assumption of exclusivity does not spur innovation). More green or eco-technologies could only be further encouraged if the retribution is bigger. If proportionality came to be introduced, a different retribution (longer term of protection) could even be analyzed and established for this kind of technology. Many other issues have been addressed by the literature, such as efforts at evergreening, me-too drugs and patent races (*see supra* note 42), and lack of recognition of ancestral knowledge of indigenous peoples (the Brazilian position on the issue, which implies a requirement of disclosure in the patent application, is probably the way to address it), among others.

The second is a very brief statement of an ulterior and broader dream: a global patent. [78]

The only way for new drugs to be developed for orphan or tropical diseases is for investments on these drugs to be rewarded. Only developing countries' markets could do so. A deep study of the relevant market for these kinds of diseases should be provided to reach necessary conclusions, but these potential markets could be attractive enough if the conditions for reward are improved. Developing countries have been advised to award compulsory licenses, establish exemptions to the patentability, and be very strict with patent examinations. As the system is now conceived, this was probably the wise way to act, although it did not create an incentive for investment in needed areas.[79] This consideration could be extended to innovation other than drugs, but the need is not felt so strongly elsewhere.

If the previous is acknowledged by developing countries and the system ceases to be perceived as harmful (or at least to be perceived as unequally harmful), the path to further consensus could be opened. To achieve the dream of a single global patent, only one administrative procedure and one global administrative authority to grant a patent and make it available in a global scale should be available.[80] To walk toward a single global patent, consensus over the

[78] This could bring a dramatic reduction on filing cost and fees (even litigations cost if the international authority could ventilate some patent disputes in a administrative sphere). The benefits would be enormous. Small innovators could in a better way access a global protection. Where could the dream take us? The World Health Organization doing the work that the Food and Drug Administration does in the United States, in regard to drug commercialization approvals, for the whole world? It is advisable to stop not to get carried away by an overdose of enthusiasm.

[79] "But there is another possibility, one which in my view better accords with what we know about the importance of patents to pharmaceutical research, and with the extraordinary value to consumers of medicines that successfully treat serious conditions. Developing nations have long had little intellectual property protection for pharmaceuticals, and we have concurrently witnessed an apparent dearth of research into the diseases of particular importance to them such as malaria and drug-resistant tuberculosis. The lack of patent protection may have resulted at least in part from an acute collective action problem—developing nations reap the full benefits from lower prices when they do not create pharmaceutical patents, yet the costs in terms of diminished research incentives are largely externalized to the rest of the developing world." Sykes, *supra* note 43, at 3.

[80] The Patent Cooperation Treaty (PCT) of 1970, which was amended in 2001, and the Patent Law Treaty (PLT) of 2000 are examples of significant progress on harmonizing the procedures for the filing and granting of patents, but these are far from establishing a global registration procedure and do not further determine the definition of novelty, inventive step, and utility/applicability. Also, these agreements do not have the universal acceptance that the TRIPS

definition of prior art, novelty, inventive step, and utility should be present worldwide. In the proposed hypothetical system, the negative effect from a legal monopoly will be felt proportionally in relation to the economic capacity of each country and its people. All the countries in the world will shoulder the burden of protection equally in proportion to the economic capacity of each country, so the weight of the burden could be collectively decided.

The same will be true for the exceptions and limitations to patentability, which in the current system may be established. [81] From the economic point of

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Agreement has. Future efforts should aim to build a stronger international system for granting patents, which, unlike the PCT and PLT, is universal and definitely linked to the TRIPS Agreement. (This is not the case of the aforementioned international instruments.) "On June 2, 2000, the Patent Law Treaty (PLT) was signed by 43 countries, with the support of the United States and the European Patent Office. The PLT does not contain substantive provisions. It rather harmonizes procedural requirements and steps: what may be required to obtain a filing date (Article 5), what may be required relating to the form and content of an application (Article 6), representation before a patent office (Article 7), various issues regarding communications (Article 8), what constitutes sufficient notification (Article 9), validity of patents if not in compliance with certain formal requirements (Article 10), relief in respect of time limits (Article 11), reinstatement of rights (Article 12), correction or addition of priority rights (Article 13). The PLT provisions should help to reduce the risk of errors by patent offices, and the time and costs of procedures for patent applicants, thereby facilitating the acquisition of patent rights internationally. The PLT also provides a clear linkage to the PCT for current and any future patent law harmonization (Article 16)." Carlos M. Correa, An Agenda for Patent Amendment and Harmonization for Developing Countries (Sept. 24, 2005) (unpublished, prepared for the Int'l Ctr. for Trade & Sustainable Development's Bellagio Dialogue), *available at* http://www.wipo.int/meetings/en/2006/scp_of_ge_06/presentations/scp_of_ge_06_correa.pdf.

[81] This could be illustrated by a hypothetical case. Imagine a new kind of technology at the moment unknown for human kind discovered in one of the traditionally inventive countries (where typically innovation take place), which opens the door for exponential technical development that will enormously benefit humanity. Suppose that this new kind of technology has certain characteristic that does not unambiguously determine its patentability under the TRIPS' rules (almost always the developing countries bring up issues regarding the patentability of new kinds of technologies). Without proportionality, developing countries prefer to declare that this kind of technology is not patentable (they see that the benefits are not worth what they pay for it), and benefit from the innovation anyways, since the developed world is rewarding it (typically the developed do not apply exceptions and limitations). If proportionality is present in the international scheme as this paper argues, the interest of rewarding innovation in this new field (which arguably will entail benefits for the human kind), would not be constrained, as it is now, by economic considerations. The inverse will happen if the patentability of a technology field is not bringing much benefit to humanity. It would not be as easy for the developed world to urge for its protection, since the period of protection in their circumscription will be longer. With proportionality reward, all countries know that exclusivity over this technology will "hurt" all countries equally, in relation to their wealth. If the "burden" is shared, it is more likely it will

view, as the system is now conceived, developing countries find a restricted scope of protection convenient. Ethical implications have been used as a strong argument to dismiss the patentability of biotechnology, for example. It has become the main bargaining tool for developing countries to maintain this exception. Ethical opposition to this kind of innovation has profound goals. On the other hand, the potential benefits that could come from research and development in biotechnology are huge. A serious debate on this issue will be possible if the economic consequences of its conceptualization were to be assumed proportionally by the different countries in application of the proposed proportional system.

In a proportional system, it is in the best interest of all countries that the scheme works well. As innovation will be a truly cooperative effort, it will be important to ensure that all cooperate accordingly and to avoid the typical free-rider problem. In that spirit, the system could compensate inventors for improper applications of the regulation. Thus, penalties could be established in the form of longer periods of protection for those countries that do not protect patents in a suitable way. Moreover, such a model, could also weigh the exceptions and limitations adopted by each country under the TRIPS Agreement. A deep economic and legal analysis will be needed. This analysis should address the following issues: the determination in each country of the novelty, inventive step and industrial application concepts; exceptions on the patentability that have been used in some countries under the TRIPS provisions *(ordre public*, health, environment, biological material, plant varieties, discoveries, "second-use patents" and, diagnostic, therapeutic, and surgical methods);[82] exceptions and limits to the

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be agreed upon. The TRIPS Agreement pertaining all the fields of intellectual property (not only patents) regulates "rights enumerated explicitly, which gives it a certain rigidity, that has been criticized by some who would have preferred it to cover not only all rights included under the term intellectual property, but to those not specifically mentioned." DONOSO, GLOBAL SOLUTION, *supra* note 1, at 74 n.56 (citing Baldo Kresalja, *El Sistema de Patentes Después del ADPIC: Comentarios y Reflexiones Sobre Su Futura Eficacia*, 4 TEMAS DE DERECHO INDUSTRIAL Y DE LA COMPETENCIA 180, Propiedad Intelectual en Iberoamérica, Buenos Aires: Ediciones Ciudad Argentina (2001); Emery Simon, *GATT & NAFTA Provisions on Intellectual Property*, 4 FORDHAM INTELL. PROP., MEDIA & ENT. L.J., 267, 276-77 (1993)). Regarding patents, for instance, proportionality could be paired with such a provision, so to strengthen the principle by which patents should be granted in any field of technology (article 27.1 of the TRIPS Agreement), and to limit exceptions and limitations. An alternative that will be coherent with the proportionality proposal is to keep the system as it is in regard to exceptions and limitations, but to weigh them embedding in the proportionality formula an indicator for the exclusions and exceptions to the patentability. This, as explained in the introduction, will be a further step towards the implementation of the proportionality proposal, which is not engaged in this paper.

[82] A distinction is made by some countries between discoveries and innovations, prohibiting the patentability of the latter.

rights conferred by a patent (*ipso iure* limits, compulsory licenses, exhaustion of rights and parallel imports); and clinical trial and data exclusivity in pharmaceuticals.

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REMIXING TRANSFORMATIVE USE: A THREE-PART PROPOSAL FOR REFORM

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Recently the Second Circuit held, in Cariou v. Prince, that Prince's unlicensed appropriation of Patrick Cariou's photographs, with what many consider to be only minor modifications, was fair use rather than copyright infringement, thus broadening the scope of copyright law's fair use defense. The Cariou decision resolved issues that are critical to appropriation art, but the Second Circuit's ruling in that case—final now that the Supreme Court has denied certiorari—has troubling implications for the entire art market. By broadening the definition of "transformative," the Second Circuit's decision in Cariou may encourage other appropriation artists to use original images in ways that have never before been considered fair use. Without the revival or reaffirmation of limitations on how one artist can use another's work, many creative artists—and the businesses that rely on their work—are likely to suffer severe economic loss. After Cariou, one might question who is best suited to evaluate the creativity that the law is designed to foster. In its wake, lawyers, artists, and dealers face growing uncertainty as to what kind of copying is legal. The ruling has led to a new sense of unease, has uncovered a generational shift in the perception of artistic ownership rights, and reflects a dramatic reversal of the roles of artists and judges in evaluating art. In order to preserve the balance between protecting existing works and incentivizing the creation of new ones, in light of recent jurisprudence, this proposal calls for three critical, interdependent changes to copyright law as it applies to visual art.

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INTRODUCTION

Art is big business. Worldwide, the global art market was valued at approximately $64 billion in 2012.[1] Institutional investors are also turning to art as an investment vehicle.[2] The assets in art investment funds worldwide rose 69% to

[1] *See, e.g.*, Kyle Chayka, *The Art Market was Worth $64 Billion in 2012*, HYPERALLERGIC (Jan. 2, 2013), http://hyperallergic.com/62911/the-art-market-was-worth-64-billion-in-2012/; *see also* TEFAF Art Market Report 2013, TEFAF MAASTRICHT, (Mar. 13, 2013), http://www.tefaf.com/DesktopDefault.aspx?tabid=15&tabindex=14&pressrelease=14879&presslanguage=.

[2] *See* Kathryn Tully, *Are Investors Bullish on the Art Market?*, FORBES (Apr. 30, 2013, 7:13 PM),http://www.forbes.com/sites/kathryntully/2013/04/30/are-investors-bullish-on-the-art-market/.

$1.62 billion in 2012.[3] In May 2014, the auction house Christie's brought in record sales of $744 million in a single evening, including sales of two Andy Warhol works for $100 million, $30 million more than their pre-sale estimate.[4]

At the center of this high-stakes art world are appropriation artists, such as Richard Prince, whose work is built on the works of other artists.[5] These works command the highest prices for modern art sales. In *Cariou v. Prince*, for example, the Prince artworks at issue were marketed to A-list celebrities like Beyoncé, Tom Brady and Anna Wintour.[6] One series of these works sold at the Gagosian gallery for more than $10 million.[7] In *Cariou*, the Second Circuit held that Prince's unlicensed appropriation of Patrick Cariou's photographs, with what many consider to be only minor modifications, was fair use rather than copyright infringement, broadening the scope of copyright law's fair use defense.[8]

The *Cariou* decision resolved issues that are critical to appropriation art, but the Second Circuit's ruling in that case—final now that the Supreme Court has denied *certiorari*—has troubling implications for the entire art market. By broadening the definition of "transformative," the Second Circuit's decision in *Cariou* may encourage other appropriation artists to use original images in ways that have never before been considered fair use. Without the revival or reaffirmation of limitations on how one artist can use another's work, many creative artists—and the businesses that rely on their work—are likely to suffer severe economic loss. The Supreme Court has noted that the fair use doctrine "permits and requires courts to avoid rigid application of the copyright statute when, on occasion, it would stifle the very creativity which that law is designed to foster."[9]

After *Cariou*, one might question who is best suited to evaluate the creativity that the law is designed to foster. In its wake, lawyers, artists, and dealers face

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[3] *Id.*

[4] Ben Beaumont-Thomas, *Christie's post-war sale reaches $744m via Warhol, Bacon and Newman*, THE GUARDIAN, (May 14, 2014, 7:16 PM), www.theguardian.com/artanddesign/2014/may/14/christies-andy-warhol-francis-bacon-barnett-newman.

[5] *See, e.g.*, Randy Kennedy, *Apropos Appropriation*, N.Y. TIMES, (Dec. 28, 2011), http://www.nytimes.com/2012/01/01/arts/design/richard-prince-lawsuit-focuses-on-limits-of-appropriation.html?pagewanted=all.

[6] Cariou v. Prince, 714 F.3d 694, 709 (2d Cir. 2013) *cert. denied*, 134 S. Ct. 618 (2013).

[7] *Id.*

[8] *Cariou*, 714 F.3d at 710.

[9] Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 577 (1994) (internal quotation marks omitted) (citing Stewart v. Abend, 495 U.S. 207, 236 (1990)).

growing uncertainty as to what kind of copying is legal. The ruling has led to a new sense of unease, has uncovered a generational shift in the perception of artistic ownership rights, and reflects a dramatic reversal of the roles of artists and judges in evaluating art.

The importance of appropriation art as a cultural element will grow exponentially in the future. The ubiquity of photo sharing sites like Pinterest, Flickr, Tumblr, 4Chan, and Instagram, together with new photography databases like Photogrammar, which catalogues FSA photographs, makes it easier to access other people's images than ever before. This is the moment for a robust discussion of how law can protect photographers and other source artists without curtailing the continued development of appropriation art. It is only the privileged few major artists who can afford the kind of complex litigation defense mounted by Prince's elite legal team. If we do not want to limit the making of appropriation art to those privileged few, we must adopt a more sensible and predictable approach to assessing the legality of this kind of art. This article proposes such an approach.

In order to preserve the balance between protecting existing works and incentivizing the creation of new ones, in light of recent jurisprudence, this proposal calls for three critical, interdependent changes to copyright law as it applies to visual art. First, courts should clarify that meritorious appropriation art is *per se* transformative use. Adopting a transformative use presumption for appropriation art will reduce the current confusion as to how much variation between the original work and the new work is permissible and what role market value plays in visual art copyright infringement cases, providing much-needed clarity to the rights of all visual artists. Second, courts should encourage expert testimony from art scholars in order to guide judges as to whether the works in question are meritorious appropriation art or not, an intentionally unexacting standard. Judges should resume their historic reluctance to evaluate visual art, especially in light of the non-obvious meanings of appropriation art. Instead, courts should invite experts on the merits of art to guide judicial determinations of infringement. Finally, Congress should revise the Copyright Act to narrow the scope of fair use for visual artists to reproductions, eliminating the current confusion between the protected transformative use defense and the infringing transformation of original works within the scope of the artists' derivative rights.

These three recommendations work best when taken together. Clarifying the transformative use determination for visual art would be significantly more difficult without the adoption of expert testimony on merit and the concurrent statutory narrowing of visual artists' derivative rights. Similarly, expert testimony would not be worth the trouble and expense without the focused point of

contention that both the adoption of the transformative use *per se* standard and the limited derivative rights would provide. Unless these three critical changes are made, visual artists' derivative rights under current copyright law will continue to collide regularly with appropriation art in untenable ways.

This article explores the consequences of the current doctrinal chaos of fair use in the visual arts, particularly in the lucrative world of appropriation art, while also providing a tripartite remedy. It contends that reforms to the judicial standards for evaluating appropriation art in infringement cases, the use of expert testimony to support those determinations, and the derivative rights of source artists are needed to clarify the scope of the transformative use defense. Part I describes the origins of transformative use as an extension of the fair use defense to copyright infringement and explains how the Second Circuit's ruling in *Cariou* and other recent decisions have expanded the scope of transformative fair use. Part II explores the impact of this expansion on the production and valuation of art, placing this legal development in the context of the modern art market. Part III reviews solutions proposed by other scholars to limit the over-expansion of the transformative use doctrine, and explores the benefits and drawbacks of each, concluding that none will be sufficient standing alone or in combination with each other. Part IV describes the benefits of adopting a transformative use *per se* standard for meritorious appropriation art, expanding the use of art experts, and reducing the scope of derivative rights for visual artists. Part V concludes.

It is time to recognize that current copyright law cannot fairly and effectively resolve the tensions between the rights of source artists like Cariou and appropriation artists like Prince. There is a fundamental mismatch between appropriation art, a form of visual art central to the modern art market, and copyright law in the visual arts. While many scholars have offered piecemeal solutions to this problem,[10] a more comprehensive set of reforms like the ones proposed here is necessary. Appropriation art requires a unique approach to

[10] *See, e.g.*, Matthew D. Bunker & Clay Calvert, *The Jurisprudence of Transformation: Intellectual Incoherence And Doctrinal Murkiness Twenty Years After Campbell v. Acuff-Rose Music*, 12 DUKE L. & TECH. REV. 92, 127 (2014) (suggesting *inter alia* that transformative use be limited to certain types of copyrightable expression); Deepa Varadarajan, *Improvement Doctrines*, 21 GEO. MASON L. REV. 657, 682 (2014) (suggesting a "substantial improvement" limitation to the fair use defense); Monika Isia Jasiewicz, Note, *"A Dangerous Undertaking": The Problem of Intentionalism and Promise of Expert Testimony in Appropriation Art Infringement Cases*, 26 YALE J.L. & HUMAN. 143, 146 (2014) (proposing that courts invite expert testimony on whether an artistic use is "transformative" in a way that would qualify for the fair use defense).

copyright infringement allegations, one that balances a limitation on the scope of derivative rights with a properly informed transformative use standard that limits judicial subjectivity on matters of artistic judgment.

The current trend toward expansion of the fair use defense creates an uncertain legal environment because it lacks clarity and predictability, potentially chilling an increasingly valuable art market in future years. This growing market requires an effective legal solution to remain sustainable. The three reforms presented here, while perhaps controversial, provide a sound basis for the realignment of copyright law in the visual arts to accommodate art creation in the 21st century.

I
Cariou's Impact on Transformative Use and the Art Market

The doctrinal confusion arising out of *Cariou*'s interpretation of transformative use is important because it concerns the application of copyright law to appropriation art, a critically and financially important form of modern art that depends on copying for its meaning and impact. While the doctrine of transformative use first entered the judicial lexicon in a case about songs, its subsequent expansion and application in art cases underscores the need for a more selective application. In short, transformative use in the visual arts requires a different set of standards than such use in other forms of copyrightable expression. The reasons for this selective application stem both from the nature of appropriation art, an established type of art that may not be well understood by judges and the general public, and from the consequences flowing from decisions like *Cariou* that threaten the future of the art market.

A. The Rise and Rise of Appropriation Art

Appropriation art is art made from other artists' work, and can involve modifying that source work in a number of different ways. As defined by the Museum of Contemporary Art in Los Angeles, California:

> Appropriation is the practice of creating a new work by taking a pre-existing image from another context—art history, advertising, the media—and combining that appropriated image with new ones. Or, a well-known artwork by someone else may be represented as the appropriator's own. Such borrowings can be regarded as the two-dimensional equivalent of the found object. But instead of, say, incorporating that "found" image into a new collage, the postmodern appropriator redraws, repaints, or re-photographs it. This provocative

> act of taking possession flouts the modernist reverence for originality.[11]

Another definition of appropriation art posits that it "takes a (usually) recognizable object, text or image and recontextualizes it. In the new context, the associations that the reader/viewer has with the appropriated object are subverted, and he or she is forced to reexamine his/her relationship to it. Therefore appropriated art is often political, satirical and/or ironic."[12]

Most people have seen appropriation art without recognizing it as a genre. Shepard Fairey's *Hope* poster depicting President Obama is perhaps the best known example of appropriation art that has been subject to a copyright challenge.[13] As a genre, however, appropriation art is at least a century old. It evolved in part from the Cubist practice of incorporating newspapers, musical scores, and drawing scraps in their work, creating new meaning from the displacement and combination of these materials.[14] Then, in a 1912 work titled "L.H.O.O.Q.," Marcel Duchamp painted a moustache onto a postcard reproduction of Leonardo da Vinci's Mona Lisa. He also wrote its title, which, in French, sounds like the phrase "elle a chaud au cul," meaning "she's got a hot ass," underneath.[15]

Appropriation art became more prominent in the 1970s, with the emergence of the "re-photographers" including Sherrie Levine, Cindy Sherman, and Barbara Kruger.[16] These artists created works largely incorporating the work of earlier photographers, and which are critical of the works that they reproduce.[17] As

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[11] MOCA THE MUSEUM OF CONTEMPORARY ART, LOS ANGELES, http://moca.org/pc/viewArtTerm.php?id=2 (last visited Sept. 2, 2014).

[12] REMIXTHEBOOK, APPROPRIATION, http://www.remixthebook.com/the-course/appropriation (last visited Oct. 29, 2014).

[13] Mike Masnick, *AP and Shepard Fairey Settle Lawsuit over Obama Image; Fairey Agrees to Give up Fair Use Rights to AP Photos,* TECHDIRT (Jan. 12, 2011, 11:22 AM), https://www.techdirt.com/articles/20110112/10170012637/ap-shepard-fairey-settle-lawsuit-over-obama-image-fairey-agrees-to-give-up-fair-use-rights-to-ap-photos.shtml.

[14] *See* HAL FOSTER ET AL., ART SINCE 1900: MODERNISM, ANTIMODERNISM, POSTMODERNISM, VOL. 1: 1900 TO 1944, at 112 (Thames & Hudson eds., 2004).

[15] *See* John Carlin, *Culture Vultures: Artistic Appropriation and Intellectual Property Law*, 13 COLUM.-VLA J.L. & ARTS 103, 109 (1988).

[16] For a more extensive discussion of the evolution of appropriation art, please see Jasiewicz, *supra* note 11, at 147-151.

[17] *Id.* at 150.

Monika Jasiewicz has noted, "[Levine's] appropriation is a form of 'criticism' or 'comment'--types of use that are supposed to be privileged in fair use analysis."[18]

What was once a fringe movement is now part of the art canon. Appropriation art is not only here to stay, it is primed to multiply. Aided by technological improvements to sourcing, sharing and manipulating images, it has become a springboard for a new generation of artists and art forms. It has never been so easy for appropriation artists to source and use existing material in all forms, including film, video and multi-media. As the website for an annual appropriation-based audio-visual media fest explains, "the past decade has witnessed the emergence of a wealth of new audiovisual elements available for appropriation into new works. In addition to official state and commercial archives, resources like vernacular collections, home movie repositories and digital archives now also provide fascinating material to repurpose in ways that lend it new meaning and resonance."[19]

Appropriation art has also evolved into new forms, many of which fall under the heading of remix, or the incorporation of source material into new works generally. The rise of remix culture and scholarship provides a new dimension to appropriation art, further signifying its permanent status. The variety of forms and purposes artists employ in remixing can be inferred from the introduction to Professor Mark Amerika's Remix Culture seminar, which:

> investigates the emergence of interdisciplinary media art practices that experiment with the art of remixing, including but not limited to literary cut-ups and procedural composition, image appropriation, Internet or net.art, sound art, glitch, collage film, installation art, live A/V performance (DJ, VJ, live coding), culture jamming / hactivism,[20] and other art forms that engage with renewable source material.[21]

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[18] *Id.* at 151.

[19] FESTIVAL OF INAPPROPRIATION, ABOUT THE FESTIVAL (Oct. 28, 2014), http://festivalofinappropriation.org.

[20] Hactivism is "a neologism that mashes up the creative use of digital tools associated with the computer hacker with the interventionist strategies of political activists. Cleverly inserting themselves into the networked space of flows, digitally inclined hactivists use whatever new media technologies they may have access to subvert the mainstream media discourse and tweak the way we construct meaning in the corporate media economy." REMIXTHEBOOK, HACTIVISM, http://www.remixthebook.com/the-course/hactivism (last visited Oct. 28, 2014).

[21] REMIX CULTURE, http://altx.com/remix/ (last visited Oct. 28, 2014); REMIXTHEBOOK, THE COURSE, http://www.remixthebook.com/the-course (last visited Oct. 28, 2014).

While many of these terms may be unfamiliar to lawyers and judges, it is easier for them and the general public to appreciate the fact that billions of images are now available on the Internet and that the number is growing daily. Several technological developments including the ubiquity of the mobile phone camera, the rise of photo sharing sites including Flickr, Instagram, Pinterest and Tumblr, and the ability to attach pictures to most if not all general social media sites, have vastly increased the number of images available to the public.

The numbers are staggering. By one estimate, 500 million photographs are shared *every day*, and the number is likely to rise.[22] Studies showing that Facebook posts containing photos are far more likely to generate "likes" also encourage the posting of pictures online.[23] Those developments make it much easier to use and adapt existing images than it was in 1990, when Hon. Pierre Leval wrote his influential article on transformative use, or, in 1994, when the Supreme Court first adopted the doctrine in *Campbell*.[24]

The clash between appropriation art as a recognized artistic movement and current copyright law came to a head in *Cariou*. It began, however, with the development of transformative use as a kind of fair use defense to copyright infringement.

B. The Origins of Transformative Use

In most cases, the Copyright Act prevents one person from taking and using another's protectable work without permission.[25] An accused copyright infringer can escape liability by showing that his use falls within the fair use exception, which allows for the use of copyrighted materials for certain limited purposes. The Copyright Act codifies the fair use defense in Section 107, setting out four factors for the court to consider in ruling on the defense:

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[22] *See, e.g.*, Seth Fiegerman, *More than 500 Million Photos are Shared Every Day*, MASHABLE (May 29, 2013), http://mashable.com/2013/05/29/mary-meeker-internet-trends-2013/.

[23] *See, e.g.*, Rebecca Corliss, *Photos on Facebook Generate 53% More Likes than the Average Post*, HUBSPOT (Nov. 15, 2012, 9:00 AM), http://blog.hubspot.com/blog/tabid/6307/bid/33800/Photos-on-Facebook-Generate-53-More-Likes-Than-the-Average-Post-NEW-DATA.aspx.

[24] *See* Pierre N. Leval, Commentary, *Toward a Fair Use Standard*, 103 HARV. L. REV. 1105 (1990); *see also* Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 579 (1994).

[25] *See* 17 U.S.C. § 107 (2012).

> (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work.[26]

Although the Copyright Act defines the four factors clearly, it does not specify how each factor should be weighted. Limited by precedent, each court has some latitude in its interpretation and weighing of each factor.

In an influential *Harvard Law Review* article, the Hon. Pierre Leval (then of the Southern District of New York) developed a theory of "transformative use," which elaborates on the first fair use factor.[27] According to Leval, in order to be transformative, the second work must add something new, with a further purpose or different character, altering the first work with a new expression, meaning, or message.[28] A work's commercial qualities are less significant when the work is extremely transformative and parodic.[29]

The Supreme Court analyzed the fair use defense and adopted the doctrine of transformative use, citing Judge Leval's article, in its 1994 decision in *Campbell v. Acuff-Rose Music, Inc.*[30] In that case, the Court was asked to decide whether 2 Live Crew's song "Pretty Woman" infringed the copyright in Roy Orbison's song "Oh Pretty Woman."[31] In determining that the rap version was a parody, and therefore fair use, the Court noted that in evaluating a fair use defense, "[a]ll [of the four factors] are to be explored, and the results weighed together, in light of the purposes of copyright."[32]

In discussing the expansion of transformative use, it may be helpful to distinguish "appropriation artists," as defined above, from "source artists." The term "source artist" denotes the artist whose work is used by the "appropriation artist" in creating the newer work at issue. These terms are fluid, in the sense that they must be defined with reference to a particular work or series of works. The

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[26] *Id.*
[27] *See* Leval, *supra* note 25, at 1111.
[28] *Id.*
[29] Mattel, Inc. v. Walking Mountain Prods., 353 F.3d 792, 803 (9th Cir. 2003).
[30] *Campbell*, 510 U.S. at 579.
[31] *Id.* at 571.
[32] *Id.* at 578.

source for a work created by an appropriation artist may itself have relied on the work of another artist.[33] In that way, she would become an appropriation artist with respect to that new work. That said, some artists tend to be, and have developed reputations as, one or the other. Richard Prince, for example, is well known as an appropriation artist in the global art market, and his work played a central role in the recent expansion of the legal limits of appropriation.

C. The Expansion of Transformative Use in Cariou

On November 12, 2013, the Supreme Court denied certiorari in *Cariou*, letting stand a decision that has dangerous repercussions for the art business.[34] *Cariou* concerned the appropriation artist Richard Prince, who created a series of artworks using the photographs of another artist, Patrick Cariou, as his base materials.[35] In 2000, Cariou published a book of his photographs of Jamaican Rastafarians called *Yes Rasta*.[36] Cariou testified about the creative choices involved in composing his photographs, including the equipment, staging, and development techniques and processes involved.[37]

Prince's works are highly collectable and expensive. They have been the subject of major survey exhibitions at the Whitney Museum of American Art in New York, the San Francisco Museum of Modern Art, and the Serpentine Gallery in London, among other places.[38] In July 2008, a New York dealer paid $8.4 million at auction for Prince's 2002 work *Overseas Nurse*.[39] Prince bought copies of *Yes Rasta*, and incorporated some of the photographs in works he displayed in St. Barth's in 2007-2008.[40] Prince ultimately completed a series of twenty-nine paintings in what he called the "Canal Zone" series, twenty-eight of which incorporated Cariou's *Yes Rasta* photographs.[41]

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[33] The term "relied on" raises a host of issues itself, since almost all art derives in some way from previous works.

[34] Cariou v. Prince, 134 S. Ct. 618 (2013).

[35] Cariou v. Prince, 784 F. Supp. 2d 337, 343 (S.D.N.Y. 2011), *rev'd in part, vacated in part*, 714 F.3d 694 (2d Cir. 2013).

[36] *Id.*

[37] *Id.*

[38] Press Release, Gagosian Gallery, Richard Prince: Cowboys (Jan. 28, 2013), *available at* http://gagosian.vaesite.net/__data/ae1f26f3f3e95aad455dccf8ffea355a.pdf.

[39] Carol Vogel, *Bacon is Again a Top Draw at Auction*, N.Y. TIMES, (Jul. 2, 2008), http://www.nytimes.com/2008/07/02/arts/design/02auct.html.

[40] *Cariou*, 784 F. Supp. 2d at 343.

[41] *Id.* at 344.

The Gagosian Gallery, one of the most prominent art galleries in the United States, exhibited twenty-two of Prince's Canal Zone paintings in November and December 2008 at one of its Manhattan galleries.[42] The gallery sold eight of the paintings for a total of $10,480,000, 60% of which went to Prince.[43] Although another New York gallery had approached Cariou about exhibiting his work, that gallery withdrew its offer when it became aware of the Canal Zone exhibit.[44] Cariou sued Prince and Gagosian for copyright infringement.[45]

1. The District Court's Ruling

The facts of the Cariou case were largely undisputed, and the District Court ruled on cross-motions for summary judgment.[46] In evaluating the first fair use factor, the purpose and character of Prince's use of Cariou's photographs, the court considered three sub-factors: commerciality, bad faith, and the extent to which Prince's art was "transformative."[47] The three factors were not given equal weight: "the more transformative the new work, the less will be the significance of other factors, like commercialism, that may weigh against a finding of fair use."[48]

In order to be transformative, the court noted, the new work should "comment on, relate to the historical context of, or critically refer back to the original works."[49] In light of that requirement, the court determined that Prince's work is transformative "only to the extent that they comment on the [Cariou] Photos."[50] Relying largely on Prince's own testimony that he didn't "really have a message" when making art, the court concluded that he "did not intend to comment on any aspects of the original works."[51] Accordingly, it found that "the transformative content of Prince's paintings [was] minimal at best."[52]

In doing so, the court suggested a negative view of Prince's artistry. For example, it quoted Prince's testimony that his message in collaging guitars onto Cariou's portraits of Rastafarian men had to do with the fact that men played

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[42] *Id.*
[43] *Id.* at 350.
[44] *Id.* at 344.
[45] *Cariou*, 714 F.3d at 704.
[46] *Cariou*, 784 F. Supp. 2d at 355.
[47] *Id.* at 347-51.
[48] *Id.* at 348 (*citing* Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 579 (1994)).
[49] *Id.*
[50] *Id.* at 349.
[51] *Id.*
[52] *Cariou*, 784 F. Supp. 2d at 350.

guitars: "He's playing the guitar now, it looks like he's playing the guitar, it looks as if he's always played the guitar, that's what my message was."[53]

The other two components of the first fair use factor, commerciality and bad faith, also weighed against Prince. In light of the Gagosian Gallery's extensive marketing of the Canal Zone show and the sale prices of Prince's works, the court determined that the "Defendants' use and exploitation of the Photos was also substantially commercial."[54] Prince's failure to even attempt to license from Cariou sealed the court's conclusion of bad faith.[55]

The court interpreted the second fair use factor, the nature of the copyrighted work, to be more restrictive where the work at issue is "expressive or creative," as opposed to "factual or informational."[56] Without further explanation, the court found that Cariou's photographs were "highly original," weighing against a finding of fair use.[57] The court quickly disposed of the third factor, the amount used, noting that Prince had appropriated the "central figures depicted in portraits taken by Cariou" in most of the works at issue, weighing heavily against a finding of fair use.[58]

The analysis of the final factor, the effect on potential market, is perhaps the most interesting. The court rejected Prince's efforts to minimize the potential market for Cariou's works even though Cariou had not aggressively marketed them.[59] The potential market, the court noted, could be larger than the actual market for the original works.[60] An author is "entitled to protect his opportunity to sell his [works]"[61] and may be entitled to judgment even when he "has evidenced little if any interest in exploiting this market for derivative works."[62]

A New York gallery owner, Cristiane Celle, had offered to show Cariou's works, but later withdrew the offer in light of the Prince exhibit.[63] Celle testified that she cancelled the Cariou show because she "did not want to seem to be

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[53] *Id.* at 349 (internal quotation marks omitted).
[54] *Id.* at 350-51.
[55] *Id.* at 351.
[56] *Id.* at 352 (citing Howard B. Abrams, THE LAW OF COPYRIGHT, § 15:52 (2006)).
[57] *Id.*
[58] *Cariou*, 784 F. Supp. 2d at 352.
[59] *Id.* at 353.
[60] *Id.*
[61] *Id.* (*citing* J.D. Salinger v. Random House, Inc., 811 F.2d 90, 99 (2d Cir. 1987)).
[62] *Id.* (*citing* Castle Rock Entm't, Inc. v. Carol Pub. Grp, Inc., 150 F.3d 132, 145-46 (1998)).
[63] *Cariou*, 784 F. Supp. 2d at 344.

capitalizing on Prince's success and notoriety," fed by the Gagosian show.[64] She did not want to exhibit work which had been "done already" at another gallery.[65] Celle's cancellation supported the court's conclusion that the defendants usurped the market for Cariou's works.[66]

The District Court may have gone a step too far by permitting the destruction of the infringing artworks. The Court ordered the defendants to hand over all copies of the infringing works for "impounding, destruction, or other disposition, as Plaintiff determines," among other remedies.[67] In its reversal, the Second Circuit described the lower court's order as granting "sweeping injunctive relief."[68] It is possible that what was perceived as too severe a remedy led in part to the reaction and the reversal that followed.

2. The Second Circuit's Reversal

On appeal, Prince retained the firm of Boies, Schiller & Flexner.[69] Although the oral argument took place on May 21, 2012, the appellate decision did not issue until April 25, 2013, nearly a year later.[70] When it did issue, the Second Circuit's reversal sent shock waves through the art world.

Throughout the decision, the court assumed that Prince's work differed in an important way from Cariou's without explaining its rationale. For example, in describing Prince's use of the *Yes Rasta* photographs, the court noted, "Prince altered those photographs significantly by among other things painting 'lozenges' over their subjects' facial features and using only portions of some of the images."[71] In general, placing an oval cut out over part of a photo does not necessarily alter the photo significantly and the basis for the court's characterization of it as such is unclear. The court did interpret size differences as significant, however, noting that the *Yes Rasta* book measures "approximately 9.5" x 12"" while Prince's artworks are "several times that size."[72]

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[64] *Id.*
[65] *Id.*
[66] *Id.* at 353.
[67] *Id.* at 355.
[68] *Cariou*, 714 F.3d at 704.
[69] *Id.* at 697.
[70] *Id.* at 695.
[71] *Id.* at 699.
[72] *Id.* at 700.

What troubled the Second Circuit most about the lower court's ruling, apparently, was the implication that a secondary work must "comment on the original or its author in order to be considered transformative."[73] In order to qualify as fair use, a secondary work could "serve[ ] some purpose other than those (criticism, comment, news reporting, teaching, scholarship and research) identified in the preamble to the [fair use] statute."[74] The secondary work only needs to "alter the original with new expression, meaning, or message."[75]

The court went on to declare that Prince's works passed the "new expression, meaning or message" test, noting that "Prince's composition, presentation, scale, color palette, and media are fundamentally different and new compared to the photographs, as is the expressive nature of Prince's work."[76] Rejecting Cariou's arguments that Prince's own failure to identify any substantial message or purpose in his work were fatal to his fair use defense, the court stated that "[w]hat is critical is how the work in question appears to the reasonable observer."[77] The court found Prince's works so transformative that the fact that they were also commercial – another first-factor element – was, effectively, irrelevant.[78]

With regard to the effect of Prince's copying on the market for Cariou's work, the court found that Prince's copying did not usurp that market.[79] The bases for that conclusion were that (1) Celle did not cancel her plans to show Cariou's work "because it had already been done at Gagosian," (2) Cariou had "not aggressively marketed his work," and (3) wealthier people were more interested in Prince's work than Cariou's.[80]

The court's emphasis on the socioeconomic status of Prince collectors was striking. Observing that "Prince's artwork appeals to an entirely different type of

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[73] *Cariou*, 714 F.3d at 706.

[74] *Id.*

[75] *Id.* (internal quotation marks omitted) (citing Campbell Acuff-Rose Music, Inc, 510 U.S. 569, 579 (1994)).

[76] *Id.* (citing Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 579 (1994)).

[77] *Id.* at 707.

[78] *See Cariou*, 714 F.3d at 708 ("Although there is no question that Prince's artworks are commercial, we do not place much significance on that fact due to the transformative nature of the work.").

[79] *See id.* at 709 ("Although certain of Prince's artworks contain significant portions of certain of Cariou's photographs, neither Prince nor the *Canal Zone* show usurped the market for those photographs.").

[80] *Id.*

collector than Cariou's," the court went on to note that Prince's works sold for millions of dollars.[81] It observed further that the invitation list for the opening dinner included:

> Jay-Z and Beyonce Knowles, artists Damien Hirst and Jeff Koons, professional football player Tom Brady, model Gisele Bundchen, *Vanity Fair* editor Graydon Carter, *Vogue* editor Anna Wintour, authors Jonathan Franzen and Candace Bushnell, and actors Robert DeNiro, Angelina Jolie, and Brad Pitt.[82]

After comparing the Prince and Cariou works, the court determined that twenty-five of the thirty Prince works at issue were protected by the fair use doctrine.[83] It remanded for consideration another five works to the district court, deeming them too close to call.[84] In doing so, however, the court did not articulate any basis on which the district court could make such a determination. It is not clear why the appellate court believed the district court would be better able to determine whether the five remaining works were sufficiently transformative than the appellate court.[85]

D. The Dubious Trend Toward Expanding Transformative Use

Cariou was not the only case to expand the fair use defense in 2013. Across the country, an appellate decision in the Ninth Circuit also expanded the scope of the transformative use defense in unpredictable and troubling ways. It concluded that a high-profile rock band's unlicensed use of an artist's original work as a concert backdrop qualified as transformative fair use. In *Seltzer v. Green Day, Inc.*, the Ninth Circuit found that the rock band Green Day's use of Derek Seltzer's

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[81] *Id.*

[82] *Id.* Although the ruling did not so specify, it is reasonable to infer from both the elite nature of the Gagosian Gallery and the price point for Prince's work that only the wealthiest collectors could afford to buy these pieces.

[83] *Cariou*, 714 F.3d at 712.

[84] *Id.*

[85] Prince's response to the verdict was interesting. When the twenty-five paintings which had been held for five years pending the resolution of the case were finally returned to him after the Second Circuit's ruling, he tweeted: "Canal Zone paintings finally back. Saw Em for the first time in 5 years. What they should of [sic] sued me for was making shitty paintings. XingEmOut." Irina Tarsis, *Photographs and Richard Prince: The Gifts That Keep on Giving*, Center for Art Law, (Feb. 24, 2014), http://itsartlaw.com/2014/02/24/photogrpahs-and-richard-prince-the-gifts-that-keep-on-giving/.

work in its concert backdrops was fair use.[86] Seltzer created an image called "Scream Icon," which he sold on stickers and posters.[87] Green Day used a version of "Scream Icon" in a video that ran during its concerts during a multi-city tour in 2009.[88] Seltzer sued Green Day for copyright infringement.[89]

Citing *Cariou*, among other precedents, and noting that "whether a work is transformative is a[n] often highly contentious topic," the Ninth Circuit ruled in Green Day's favor.[90] The court found that Green Day's use of "Scream Icon" amounted to new creative expression because it juxtaposed the original image with religious imagery: "With the spray-painted cross, in the context of a song about the hypocrisy of religion, surrounded by religious iconography, Staub's video backdrop using *Scream Icon* conveys 'new information, new aesthetics, new insights and understandings' that are plainly distinct from those of the original piece."[91] This, the court ruled, was transformative, and therefore the first fair use factor weighed in Green Day's favor.

Green Day and *Cariou* are not the only indicia of transformative use's expansion, although they are among the most newsworthy recent cases. Scholarly surveys underscore the conclusion that courts are expanding the scope of transformative use, and consequently fair use, across the country. Professor Sag examined more than 280 fair use cases from 1978 to 2011.[92] His research "reinforce[d] the dominance of transformative use over other factors" in determining case outcomes.[93] In another study, Professor Netanel looked at 79 opinions in fair use cases from 1996 through 2010.[94] He concluded that "the transformative use paradigm, as adopted in *Campbell*, overwhelmingly drives fair use analysis in courts today."[95] The trend toward consideration of transformative use was significant. Netanel observed that courts' use of the transformativeness analysis "increased measurably during the period 2006-2010, even if it was already

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[86] Seltzer v. Green Day, Inc., 725 F.3d 1170, 1179 (9th Cir. 2013).
[87] *Id.* at 1173.
[88] *Id.* at 1174.
[89] *Id.* at 1175.
[90] *Id.* at 1176.
[91] *Id.* at 1177.
[92] *See* Matthew Sag, *Predicting Fair Use*, 73 OHIO ST. L.J. 47, 52 (2012).
[93] *Id.* at 84.
[94] *See* Neil Weinstock Netanel, *Making Sense of Fair Use*, 15 LEWIS & CLARK L. REV. 715, 731 (2011).
[95] *Id.* at 734.

quite high previous to that period."[96] "[Eighty-five percent] of district court opinions and 93.75%, or all but one, of appellate opinions" analyzed whether the challenged use was transformative.[97]

More importantly, Netanel's research underscored the determinative nature of transformative use in the courts' determinations. He noted that since 2005, "decisions that unequivocally characterize the defendant's use as transformative almost universally find fair use."[98] When a court found that the challenged use was transformative, there was a "sharp decline in the weight that courts say they are giving to whether a use is commercial."[99]

One interpretation of this data is that a finding of transformativeness effectively reinterprets fair use factors three and four toward inevitably favoring fair use.[100] Arguably, it also reinterprets the market analysis underlying the fourth factor. The driving concern changes from "whether the use falls within a conceivable licensing market for the copyright owner" to disregarding that potential market entirely.[101] Instead, it "effectively delimits the legally relevant market for the fourth factor. If a use is unequivocally transformative, then, by definition, it causes no market harm since the copyright holder does not have a right to exclude others from the market for transformative uses."[102]

The rise of transformative use as a guiding if not determinative factor in fair use analysis is exemplified in a pair of cases concerning another prominent artist, Jeff Koons. In the earlier case, Koons' use of another artist's work was held to be copyright infringement. In the later case, on similar facts, Koons' use of another artist's work was held to be transformative and fair use.

The first case, *Rogers v. Koons*, concerned a Koons sculpture called String of Puppies exhibited at New York's Sonnabend Gallery in 1988.[103] Koons based this work on a black and white photograph by Art Rogers called Puppies, which

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[96] *Id.* at 736.

[97] *Id.*

[98] *Id.* at 740.

[99] *Id.* at 742.

[100] Kim J. Landsman, *Does Cariou v. Prince Represent the Apogee or Burn-Out of Transformativeness in Fair Use Jurisprudence? A Plea for a Neo-Traditional Approach*, 24 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 321, 354 (2014).

[101] Netanel, *supra* note 95, at 745.

[102] *Id.* at 744.

[103] Rogers v. Koons, 751 F. Supp. 474 (S.D.N.Y. 1990), *aff'd*, 960 F.2d 301 (2d Cir. 1992), *cert. denied*, 506 U.S. 934 (1992).

had been licensed by Museum Graphics for a notecard. Rogers sued Koons for copyright infringement in 1989. Although Koons argued that String of Puppies was fair use because it was a parody or satire, the court granted summary judgment in Rogers' favor.[104] When Koons appealed, the court of appeals affirmed the district court's decision.[105]

The second case, *Blanch v. Koons*, concerned Koons' appropriation of photographer Andrea Blanch's work in Koons' 2000 collage, Niagara.[106] Niagara consists of images of women's lower legs and feet dangling above a tray of pastries.[107] One pair of feet was modeled on Blanch's photograph, "Silk Sandals by Gucci."[108] Blanch's photograph showed the woman's feet resting on a man's lap in an airplane cabin.[109] For Niagara, Koons reproduced only the legs, feet, and shoes from Blanch's photograph, adding a heel to one shoe, altering their orientation, and varying the coloring.[110] Blanch sued Koons for copyright infringement. The Supreme Court's *Campbell* decision had issued in the years between *Rogers* and *Blanch*, and Koons now argued the defense of transformative and fair use instead of parody.[111] The district court agreed that Koons' use of Blanch's photograph was fair, and the court of appeals affirmed.[112]

This is not to say that courts always find in favor of the appropriation artist when confronted with copyright infringement claims.[113] However, its influence on judicial decision-making in this area suggests that the precedent set by *Cariou* is here to stay, at least for the time being. Following the Supreme Court's denial of certiorari, *Cariou* will stand as precedent in the Second Circuit, the home of one of the most influential art markets in the world. Given these rulings and the scholarly surveys of many other court rulings, we may expect circuit courts to continue to expand the scope of transformative use. The standards used in these cases are too

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[104] *See Rogers*, 751 F. Supp. at 480.
[105] *See Rogers*, 960 F.2d at 306.
[106] Blanch v. Koons, 467 F.3d 244, 246-47 (2d Cir. 2006).
[107] *See id*. at 247.
[108] *Id*. at 247-248.
[109] *Id*. at 248.
[110] *Id*.
[111] *Id*. at 252-253.
[112] *Id.* at 259.
[113] *See, e.g.*, Morris v. Guetta, No. LA CV12-00684 JAK (RZx), 2013 WL 440127, at *8 (C.D. Cal. Feb. 4, 2013) (rejecting defendant's fair use defense to plaintiff photographer's copyright infringement claims); Friedman v. Guetta, No. CV 10–00014 DDP (JCx), 2011 WL 3510890, at *7 (C.D. Cal. May 27, 2011) (finding infringement despite defendant's claims that his use of plaintiff's photograph was transformative).

often unclear and unpredictable. This trend makes it all the more important to impose sensible limitations on fair use in the making of 21st century art.

II
THE TROUBLING CONSEQUENCES OF EXPANDING TRANSFORMATIVE USE

The expansion of fair use illustrated by *Cariou* and its progeny raises several types of concerns: doctrinal, societal, and market-based. By blurring the line between transformative and derivative works, these decisions represent a significant shift in copyright law. The repercussions will affect the business relationships among artists, dealers, and investors, and will shift the legal boundaries of creativity.

A. The Doctrinal Impact

In the wake of *Cariou*, several observers have commented on the doctrinal shifts that the ruling represented.[114] Legal scholars were not the only critics of the opinion. Artists banded together to decry the *Cariou* ruling. When the Second Circuit remanded consideration of five works back to the district court, a coalition of professional associations and photographers filed a comprehensive amicus brief urging the court to reject the fair use defense as to those works.[115] The amici included the American Society of Media Photographers, the Picture Archive Council of America, Professional Photographers of America, the National Press Photographers Association, photographer Jeremy Sparig, the Graphic Artists Guild, American Photographic Artists, and the American Society of Journalists and Authors.[116]

Perhaps the most disturbing aspect of *Cariou* is the lack of guidance offered as to how much difference is necessary for a reasonable observer to determine that the use is transformative. A balancing test based on unclear factors is easy to get wrong. If adapting one artist's photographs by reprinting them in a different color

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[114] *See, e.g.*, Elizabeth Winkowski, *A Context-Sensitive Inquiry: The Interpretation of Meaning in Cases of Visual Appropriation Art*, 12 J. MARSHALL REV. INTELL. PROP. L. 746, 760 (2013); *Copyright Law - Fair Use - Second Circuit Holds That Appropriation Artwork Need Not Comment on the Original to Be Transformative. - Cariou v. Prince, 714 F.3d 694 (2d Cir. 2013)*, 127 HARV. L. REV. 1228, 1229 (2014).

[115] Brief for The American Photographic Artists et al. as Amici Curiae Supporting Plaintiff, Cariou v. Prince, 784 F. Supp. 2d 337 (S.D.N.Y. 2011) (No. 08 CIV 11327), *available at* http://blogs.nppa.org/advocacy/files/2013/12/Cariou-v-Prince-Dist-Ct-Amicus-Brief-12-16-13.pdf.

[116] *Id.*

and size and perhaps adding small decorative elements is fair use, then it is hard to imagine what kind of adaptive copying would not be permitted. A likely effect of this doctrinal vagueness is that whether one artist infringes the copyright of another will boil down to the aesthetic judgment of a particular judge or panel of judges. Subsequent decisions may therefore require lawyers and courts to parse the differences between copies of accused artworks, which may not be widely available, in order to make their best guess as to what is "different enough" to pass legal muster.

A related danger of recent case law is the increasingly blurry line between derivative and transformative use. According to the Copyright Act,

> 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."[117]

A transformative work, by contrast, is one that adds "something new, with a further purpose or different character, altering the first with new expression, meaning or message."[118] The definition of transformative use is comparatively vague, inviting a great deal of judicial creativity in its application.

The difference between derivative use and transformative use is getting harder to detect: "[i]f a court finds that defendants' use of an author's work is 'transformative' because it reaches new markets or makes the work available to a new audience, that finding could risk usurping the author's derivative work rights. Ultimately, those rights could hinge on a 'race to the market' for new and sometimes unanticipated uses."[119]

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[117] 17 U.S.C. § 101 (2010).

[118] *Campbell*, 510 U.S. at 579.

[119] *See Fair Use: Hearing Before the Subcomm. on Courts, Intellectual Property, and the Internet of the H. Comm. on the Judiciary*, 113th Cong. 10 (2014) (statement of June M. Besek, Exec. Dir. of the Kernochan Center for Law, Media and the Arts and Lecturer-in-Law, Columbia Law School), *available at* http://judiciary.house.gov/_cache/files/83d5bf33-9587-4908-849f-e63edc1b49f5/012814-testimony---besek.pdf [hereinafter, Statement of June M. Besek].

Arguably, that is what happened to Cariou. In his Canal Zone exhibit, Prince established a high-end market for what could be considered derivative works based on Cariou's photographs, usurping that market and foreclosing the possibility of a Cariou exhibit like the one Celle had planned.

A further danger of the current slide toward finding that all appropriation art is *per se* fair use may be a violation of the United States' obligations under the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) and other international treaties.[120] For example, the TRIPS agreement requires that signatories' copyright exceptions (for foreign works) meet a three-step test.[121] That test provides:

> Members shall confine limitations or exceptions to exclusive rights to certain special cases which do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holder.[122]

The first of the three steps requires that any exceptions to copyright protection be limited in scope, according to the World Trade Organization's dispute resolution panel.[123] "Normal exploitation" includes all ways in which the author would normally seek to exploit the work now or in the future.[124] In other words, an exception may not compromise a normal market for the work. The third step requires that the law protect authors from unreasonable loss of income.[125] Expanding the scope of transformative use without clearer boundaries may violate each of these three steps.

B. The Commercial Impact

In order to appreciate the impact of *Cariou* on the art industry, it is important to understand both the recent rise of appropriation as a means of making art and the central role of dealers and auction houses in the art market. Appropriation is a hot

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[120] *Id.* at 12-13.

[121] *Id.*

[122] Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, art. 13, 1869 U.N.T.S. 299 (1994).

[123] *See* Panel Report, *United States – Section 110(5) of the US Copyright* Act, WT/DS160/R (June 15, 2000), *available at* http://www.wto.org/english/tratop_e/dispu_e/1234da.pdf.

[124] *See* Statement of June M. Besek, *supra* note 120, at 12.

[125] *Id.*

topic in the art world.[126] Some of the most sought after modern art is made by high-profile appropriation artists like Prince, who sold a piece at an auction for more than $3.7 million in May 2014.[127] A widely acclaimed, 24-hour long video made up of appropriated bits of film and television shows called "The Clock" has been touring major art venues around the world since its debut in 2010.[128] In recent years, appropriation art has been the focus of major exhibitions in New York, Chicago, and Los Angeles.[129]

The Second Circuit's emphasis on the socioeconomic strata and celebrity of the people who attended Prince's opening gala correlates with an increasingly important characteristic of the art market. Dealers, collectors, museums, and auction houses all play significant roles in driving up the market prices of certain artists' work. According to one economist, collectors describe contemporary art "in terms of innovation, investment value, and the artist being 'hot,' meaning a relative unknown where word-of-mouth reports make them suddenly sought-after."[130]

The valuation of any given work depends in large part on the investments that dealers, collectors, and museums make in certain emerging artists.[131] When museums exhibit an artists' work, they add to the work's exhibition and sale history, or provenance, thereby increasing the price that work can command in the future.[132] High-profile exhibitions like the Whitney Museum of American Art's

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[126] *See, e.g.*, Kennedy, *supra* note 6.

[127] *Richard Price, Untitled (Cowboy)*, CHRISTIE'S, http://www.christies.com/lotfinder/photographs/richard-prince-untitled-5792595-details.aspx (last visited May 27, 2014).

[128] *See, e.g., Christian Marclay's* The Clock *Makes Midwest Debut,* WEXNER CTR. FOR THE ARTS, http://wexarts.org/press/christian-marclay-s-clock (last visited Sept. 2, 2014).

[129] *See, e.g.*, Kennedy, *supra* note 6; Deborah Vankin, *An Appropriate Time for Appropriation Art at Hammer*, LATIMES.COM (Feb. 7, 2014), http://articles.latimes.com/2014/feb/07/entertainment/la-et-cm-hammer-art-appropriation-20140209; *A Study in Midwestern Appropriation,* HYDE PARK ART CENTER, http://www.hydeparkart.org/exhibitions/ema-study-in-midwestern-appropriationem (last visited Sept. 2, 2014).

[130] DON THOMPSON, THE $12 MILLION STUFFED SHARK: THE CURIOUS ECONOMICS OF CONTEMPORARY ART 12 (2008).

[131] *See, e.g.*, Elizabeth M. Petty, *Rauschenberg, Royalties and Artists' Rights: Potential Droit de Suite Legislation in the United* States, 22 WM. & MARY BILL OF RTS J. 977, 1005-1006 (2014).

[132] *Id.*

Biennial help create taste and add to an artists' value.[133] So do exhibitions at certain galleries, including those of "superdealers" Larry Gagosian, who exhibited the Prince works at issue in *Cariou*.[134] The director of the Andy Warhol Museum observed that "[i]n many ways, having a show with [Gagosian] is synonymous with having a show at MoMA or the Tate Modern [in London]."[135]

Given the increasing ubiquity of the practice, the legal scope of borrowing source material shapes both the artistic and ethical development of the profession. This is especially true for younger artists, whose attitude toward borrowing is significantly different from artists of earlier generations. As Stephen Frailey, the head of the undergraduate photography program at the School of Visual Arts in Manhattan, told the *New York Times*, "[t]hey feel that once an image goes into a shared digital space, it's just there for them to change, to elaborate on, to add to, to improve, to do whatever they want with it. They don't see this as a subversive act. They see the Internet as a collaborative community and everything on it as raw material."[136] This sense of freedom among young artists is mirrored in the general public by the creation of apps such as Mixel, which facilitates the appropriation of images in new user-generated art.[137]

The expansion of fair use will affect source artists as well. If the law permits appropriation artists like Prince to adapt materials without clear limits, it is easy to imagine that the sources such artists appropriate from may dry up for lack of commercial incentive.[138] That incentive is critical. Cariou's investment of time and trust-building in creating his photographs was significant. He spent "some six years" with the Rastafarians he documented in *Yes Rasta*, "gaining their trust and taking their portraits."[139] One could argue that that time and effort was necessary for Cariou to develop the kind of relationships with his subjects that would permit him to take the portraits in the first place. The Second Circuit's decision undermines the importance of this kind of effort.

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[133] *Id.*

[134] *See* Eric Konigsberg, *The Trials of Art Superdealer Larry Gagosian*, VULTURE (Jan. 20, 2013, 9:10 PM), http://www.vulture.com/2013/01/art-superdealer-larry-gagosian.html.

[135] *Id.*

[136] *See, e.g.*, Kennedy, *supra* note 6.

[137] *See, e.g.*, MIXEL, mixel.cc (last visited Sept. 2, 2014).

[138] This is not to suggest that all artists have a profit motive—indeed, Patrick Cariou did not commercialize his art extensively—but simply to recognize that commodifying art requires compensation.

[139] Cariou v. Prince, 784 F. Supp. 2d 337, 343 (S.D.N.Y. 2011) *rev'd in part, vacated in part*, 714 F.3d 694 (2d Cir. 2013).

In fact, photographers like Cariou may be more vulnerable to this expansion of fair use copying than painters, sculptors, and other visual artists. Some commentators have suggested that copyright law gives less protection to visual artists than to authors because it limits the right to copy, which isn't as important to visual artists as it is to authors because of their different modes of profit.[140] While visual artists rely on a "single-copy business model," selling one unique version of each work, authors, rely on a "multi-copies business model," in which they expect to sell many copies of each original work. By focusing on the right to copy, as its name suggests, copyright law effectively discriminates against visual artists in comparison to authors.[141] This argument, however, ignores a key distinction of photography as a medium. It is easier and more common for photographers to sell copies of their work than for many other kinds of artists. Cariou primarily sold his work, for example, through a mass-produced book.[142] Appropriation artists, especially painters, primarily exhibit and sell single copies of their work, commanding higher prices in part because of their scarcity.

Lastly, the expansion of fair use as illustrated by *Cariou* threatens the existence of the photographic licensing market. That market, which serves as a conduit between photographers and the publications or other entities that want to license their work, can be sidestepped entirely if stealing photos is fair use.[143] Indeed, the fact that there is currently an operational licensing market that Prince could have accessed makes it more difficult to justify his unlicensed use of Cariou's photographs as fair.[144]

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[140] *See, e.g.*, Guy A. Rub, *The Unconvincing Case for Resale Royalties*, 124 YALE L.J. F. 1 (April 25, 2014), http://yalelawjournal.com/forum/the-unconvincing-case-for-resale-royalties.

[141] *See, e.g.*, U.S. COPYRIGHT OFFICE, RESALE ROYALTIES: AN UPDATED ANALYSIS 2 (Dec. 2013), *available at* http://copyright.gov/docs/resaleroyalty/usco-resaleroyalty.pdf ("many visual artists [are placed] at a material disadvantage vis-à-vis other authors"); Rub, *supra* note 141 at 31 ("[C]opyright law has effectively discriminated against [visual artists] in many respects for centuries.") (*quoting* Shira Perlmutter, *Resale Royalties for Artists: An Analysis of the Register of Copyrights' Report*, 16 COLUM.-VLA J. L. & ARTS 395, 403 (1995)); *see also* Petty, *supra* note 132, at 986-987.

[142] Cariou v. Prince, 784 F. Supp. 2d at 343.

[143] *See, e.g.*, Brief for The American Photographic Artists et al., *supra* note 116, at 18.

[144] *See* Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 568 n.9 (1985) ("[here] there is a fully functioning market that encourages the creation and dissemination of memoirs of public figures. In the economists' view, permitting 'fair use' to displace normal copyright channels disrupts the copyright market without a commensurate public benefit"); Am. Geophysical Union v. Texaco Inc., 60 F.3d 913, 931 (2d Cir. 1994) ("it is sensible that a particular unauthorized use should be considered 'more fair' when there is no ready market or

C. The Societal Impact

The *Cariou* case has important implications for the relationship between law and society as well. Prince's business approach, like that of many appropriation artists, also raises ethical concerns. Even if courts determine that his adaptation of Cariou's photographs was legal, was it ethical of him to use Cariou's images without attribution? If Prince can make headlines, and millions of dollars, from taking another artists' work, his success sends a message to younger artists that is not easily countered. It is difficult to expect art teachers to demand integrity of their students when the art world and/or the legal system discards its value.[145]

The issue is especially acute for younger artists, who have come of age in an era that lauds appropriation art as much as entirely original compositions. Copyright law, like all intellectual property law, must strike a balance between the protection of original creative work and the common interest in access. If case law undermines the importance of original work, as *Cariou* arguably does, what is the counterweight against free-for-all use of visual works that are not yet in the public domain? Indeed, if current trends continue, the future of the "public domain" as a concept may change as well.

III
EVALUATING PROPOSED SOLUTIONS TO THE TRANSFORMATIVE USE PROBLEM

Copyright scholars, art critics and general observers have been exchanging ideas about how to repair the damage done by *Cariou* since the Second Circuit's decision issued. While many scholars have offered innovative solutions based on important insights into the nature of the problem, their proposals often suffer from a lack of practicality. However, the shortcomings of these proposals form, in part, the basis on which more workable solutions can be developed.

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means to pay for the use, while such an unauthorized use should be considered 'less fair' when there is a ready market or means to pay for the use").

[145] *Cariou* can also be viewed as an example of the imbalance of power in the legal system. While the identity of counsel is not generally considered relevant to the outcome of the case, it would be disingenuous to ignore the fact that Prince's appellate law firm was Boies, Schiller & Flexner LLP, one of the most expensive and prestigious law firms in the country. The dramatic reversal of the Second Circuit's opinion must have resulted from a significant legal effort by appellate counsel, some of which was described in a *New York Times* article on the increasing prevalence of appropriation art. *See* Kennedy, *supra* note 6.

A. Proposed Statutory Amendments Paint With Too Broad a Brush

One potential remedy for the lack of clarity exposed by *Cariou*, *Green Day*, and similar cases might be to amend the Copyright Act to provide guidance for the proper scope and application of the transformative use defense. Congress could, for example, amend the Copyright Act to clarify the distinction between derivative use and transformative use, which is not codified in the statute.[146] Such an amendment, however, would likely do less to ease the interpretive burden on judges than the recommendations proposed in this article. No single definition of transformative use is likely to capture the fine but important distinctions inherent in the ways artists create meaning among the various types of copyrightable expression.

Another scholar has proposed amending Section 101 of the Copyright Act to establish a precise list of uses that would qualify as transformative, to parallel the current statutory definition of derivative use that appears in 17 U.S.C. § 101.[147] Indeed, writers have suggested and courts have adopted a number of other more specific measures of transformative use across genres, none of them satisfactory. These include exemptions for "productive copying,"[148] copying for "socially laudable purposes,"[149] copying for "a different purpose from the original,"[150] and copying with "implied consent" which in turn would accord with the "prevailing understanding of the community" and/or "customary practice."[151]

Defining transformative use more precisely through amendment of the Copyright Act has some drawbacks. First, any illustrative list of transformative uses will, by nature, be limited in scope. A determination of fair use based on transformative use will still rely on the fact finder's subjective analysis to some extent. The same can be said, however, for the interpretation of other kinds of fair use and, more generally, in any application of precedent. The open-ended nature

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[146] In fact, the Judiciary Committee held a hearing on the proper scope of the fair use defense on January 28, 2014. *The Scope of Fair Use: Hearing Before the Subcomm. on Courts, Intellectual Prop. and the Internet of the H. Comm. on the Judiciary*, 113th Cong. (2014), *available at* http://judiciary.house.gov/index.cfm/2014/1/the-scope-of-fair-use.

[147] MICHAEL A. EINHORN, MEDIA, TECHNOLOGY AND COPYRIGHT: INTEGRATING LAW AND ECONOMICS, 33 (2004).

[148] Sony Corp. v. Universal City Studios, Inc., 464 U.S. 417, 455 n.40 (1984).

[149] *Id.* at 478-9 (Blackmun, J., dissenting).

[150] Am. Geophysical Union v. Texaco, 802 F. Supp. 1, 14-15 (S.D.N.Y. 1994), *aff'd*, 60 F.3d 913 (2d Cir. 1994).

[151] Lloyd L. Weinreb, *Fair's Fair: A Comment on the Fair Use Doctrine*, 103 HARV. L. REV. 1137, 1143-4, 1160 (1990).

of the fair use defense, and of transformative use in general, has long been recognized as a necessary condition.[152]

Second, a more specific definition of transformative use may have the overall effect of narrowing the defense, thereby increasing the chances that appropriation artists will be held liable for copyright infringement. They may be discouraged, in turn, from producing work that the art market, media, and popular audiences value. Because appropriation artists' work often commands such high prices, investors and collectors may claim that regulating appropriation art more closely will hurt the art market overall. Dealers and galleries may be more hesitant to sell and show such work if they perceive an increased risk of liability themselves. After all, Larry Gagosian, the owner and founder of the prestigious Gagosian Gallery was a named defendant in *Cariou v. Prince*.[153] Resistance from the intermediaries between artists and collectors may further depress the market for this lucrative type of art.

B. Compulsory Licensing for Visual Artists Is Untenable in the United States

Scholars have also proposed amending the Copyright Act to provide compulsory licensing for visual artists who incorporate copyright-protected works of others into their work.[154] Compulsory licensing already exists to some extent in music with regard to cover songs,[155] and some commentators have proposed expanding the scope of compulsory licensing to include digital sampling as well.[156] In the wake of *Cariou*, some commentators suggested that it might be time to

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[152] *See, e,g.*, Matthew Sag, *G-d in the Machine: A New Structural Analysis of Copyright's Fair Use Doctrine*, 11 MICH. TELECOMM. & TECH. L. REV. 2 (2005).

[153] *See* Cariou v. Prince, 784 F. Supp. 2d 337, 343 (S.D.N.Y. 2011), *rev'd in part, vacated in part*, 714 F.3d 694 (2d Cir. 2013).

[154] *See, e.g.*, Judith Bresler, *Begged, Borrowed or Stolen: Whose Art Is It, Anyway? An Alternative Solution of Fine Art Licensing*, 50 J. COPYRIGHT SOC'Y OF THE U.S.A. 15 (2002).

[155] Section 115 of the Copyright Act provides for compulsory licensing in order to perform or record someone else's original song. 17 U.S.C. § 115(a)(1) (2012).

[156] *See, e.g.*, Kenneth M. Achenbach, *Grey Area: How Recent Developments in Digital Music Production Have Necessitated the Reexamination of Compulsory Licensing for Sample-Based Works*, 6 N.C. J. L. & TECH. 187, 190-191 (2004); Chris Johnstone, Note, *Underground Appeal: A Sample of the Chronic Questions In Copyright Law Pertaining to the Transformative Use of Digital Music in a Civil Society*, 77 S. CAL. L. REV. 397, 399-402 (2004); Lucille M. Ponte, *The Emperor Has No Clothes: How Digital Sampling Infringement Cases Are Exposing Weaknesses In Traditional Copyright Law and the Need for Statutory Reform*, 43 AM. BUS. L.J. 515, 547 (2006) (critiquing compulsory licensing proposals).

revive that idea in the visual arts in order to ensure fair compensation for source artists.[157]

Licensing is particularly inapt in this context because of the critical and transgressive nature of appropriation art as a movement, as described above.[158] The history of appropriation art reveals that the practice of appropriation is fundamentally aimed at challenging and departing from prior modes of representation.[159] As one scholar has put it, "[w]hile societal criticism is usually incidental to traditional parody, it is the avowed purpose of appropriationist visual art."[160]

Another difficulty inherent in a potential compulsory licensing scheme is the question of whether exhibited or published secondary works would be subject to a license fee, or whether the licensing scheme would be limited to actual sales. As noted above, appearing in an exhibit, especially at a premiere location such as the Whitney Museum or the Gagosian Gallery, can vastly increase the worth of an artist's work.[161] A compulsory licensing scheme that addressed only the actual sale of art would address only part of the process by which art is valued, and increases in value, in the global art market.

A greater challenge would be determining who might administer the licensing program. Since so many major art sales take place through galleries and auction houses, they would be the logical first choices. If galleries were compelled to direct a percentage of the sale price of an appropriation piece to a source artist(s), however, the galleries would bear the burden of identifying (or verifying, if the appropriation artist will assist in this task) the source artist(s) and the date of the source work in order to determine whether or not the work was in the public

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[157] *See, e.g.*, Tarsis, *supra* note 86.

[158] *See, e.g.*, Martha Buskirk, *Commodification as Censor: Copyrights and Fair Use*, 60 October MIT Press 82, 102 (1992) (explaining that *Rogers v. Koons* "raises a number of important and troubling questions about the legal status of artistic appropriation, and it may set an important precedent with respect to the appropriation of images in works of art.... The decision is particularly troubling given the way in which strategies of appropriation have often performed a critical function").

[159] Jasiewicz, *supra* note 11, at 151.

[160] E. Kenly Ames, Note, *Beyond* Rogers v. Koons*: A Fair Use Standard for Appropriation*, 93 COLUM. L. REV. 1473, 1500 (1993). *But cf.* Darren Hudson Hick, *Appropriation and Transformation*, 23 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1155, 1177 (2013) (rejecting the idea that "we [can] describe the contemporary category of appropriation art on the basis that it is essentially a form of social commentary.").

[161] *See, e.g.*, Petty, *supra* note 132, at 1006-7.

domain. If so, presumably no license fees would be due. If not, however, the gallery would then face the task of transferring payment to that person or those people. If the source artist does not know that a fee is owed to her, she has no incentive to verify the payment.

That complication suggests that enforcement of the licensing scheme would be challenging as well. This would be especially difficult with regard to private sales. The difficulty of ensuring that the license fee extracted from the seller makes its way to the source artist multiplies when the seller is a private individual rather than a gallery or auction house. Increasingly, collectors and sellers are using private sales to transfer art rather than public auctions.[162] One reason is that private sales lessen the risk of failure in a prestigious market. As one New York gallery director explained, "If [a piece] doesn't sell [privately], it's not a public event. […] However, if your painting is on the cover of an auction catalog and it's been marketed globally and then doesn't sell – ouch!"[163] As more transactions are handled privately, a compulsory licensing scheme becomes harder to administer and enforce.

Compulsory licensing may be easier to administer and enforce in the music business than it would be in the visual arts. Although the Supreme Court developed the transformative use defense in the context of a music case,[164] the differences between the music business and the art business help illustrate why licensing would be harder to administer in the latter. In the music industry, a few major organizations help consolidate the licensing process, including the Recording Industry Association of America (RIAA) and Broadcast Music Incorporated (BMI). In the visual arts, however, there is no comparable hegemony. Organizations such as VAGA and Artists' Rights Society (ARS), which describes itself as the "preeminent copyright, licensing, and monitoring organization for visual artists in the United States,"[165] represent many visual artists' interests. VAGA, for example, serves as a licensing clearinghouse for its member artists. When "any type of image user seeks to reproduce a work of art by one of our members, VAGA issues a license document, which details and limits the rights granted, contains clauses protecting the integrity of the licensed work,

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[162] Katya Kazakina, *Bargain Warhols, Secrecy Bring Collectors to Private Art Sales*, BLOOMBERG (July 27, 2009, 12:01AM), http://www.bloomberg.com/apps/news?pid=newsarchive&sid=apWHIzppllaM.

[163] *Id.*

[164] *See Campbell*, 510 U.S. at 569.

[165] *History of ARS*, ARTISTS RIGHTS SOC'Y, http://www.arsny.com/about.html (last visited Oct 26, 2014).

and ensures payment of a fee commensurate with the nature of the use."[166] ARS, in contrast, "act[s] on behalf of [its] members to streamline the process for reviewing requests for reproduction" but does not license or sell their art on their behalf.[167]

Perhaps the most intransigent difficulty in a general licensing scheme, however, has to do with the difficulty of pinpointing a single original work. As discussed above, it is difficult to pinpoint verbally what the "expression" of any artwork is, and therefore what elements can be protected by copyright, as a rule, in the same way that "expression" can be identified and quoted in written work.[168]

The many problems inherent in a compulsory licensing scheme can be illustrated in part by analogy to the recent debate over the possible institution of a federal resale royalty structure.[169] A resale royalty provides that when a work of art is sold by someone other than the artist, some percentage of the sale price goes to the artist no matter how long it has been since the artist sold the work originally. Resale royalty laws are common in Europe and other parts of the world, but have been met with mixed success in the United States.[170] In 2013, however, the Copyright Office issued a report recommending that Congress consider adopting such rights.[171] In February 2014, a group of congresspersons introduced a bill which, if passed, would grant visual artists the right to collect resale royalties.[172] Critics of the bill pointed out that the logistical burden and administrative costs of such a scheme are likely to outweigh the benefits. They noted, for example, that the bill's provisions making the collection of resale royalties transferable and retroactive would have done more harm than good.[173] Similar arguments can be

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[166] *General Information and Services*, VAGA RIGHTS, http://vagarights.com/general-information-services/ (last visited Oct. 26, 2014).

[167] *Services Provided*, ARTISTS RIGHTS SOC'Y, http://www.arsny.com/services.html (last visited Oct. 26, 2014).

[168] That said, it could be argued that determining whether an excerpt of a written work is the "heart" of the original, as fair use requires us to do when evaluating the use of quotes is a comparably difficult exercise. *See, e.g.*, *Campbell*, 510 U.S. at 569.

[169] The concept of a resale royalty itself is not meant to redress the imbalance of power between a source artist and an appropriation artist. In other words, resale royalties would not compensate a source artist like Cariou when an appropriation artist like Prince uses his work.

[170] *See, e.g.*, Petty, *supra* note 132, at 985 (noting that every European country other than Switzerland has a resale royalty law, as do several Latin and South American countries); *see also* Rub, *supra* note 141.

[171] *See, e.g.*, U.S. COPYRIGHT OFFICE, *supra* note 142.

[172] The American Royalties Too Act of 2014, H.R. 4103, 113th Cong. (2014).

[173] *See, e.g.*, Rub, *supra* note 141 at 2; Petty, *supra* note 132, at 1006-7.

made against a compulsory licensing scheme, and would likely arise if a compulsory licensing scheme were to be proposed in a more formal manner.

IV
A THREE-STEP SOLUTION TO REFORMING TRANSFORMATIVE USE IN THE VISUAL ARTS

Resolving the current mismatch between 21st century appropriation art and copyright law requires at least three changes. First, courts should clarify that meritorious appropriation art is *per se* transformative use, thus reducing the current confusion as to how much variation between the original work and the new work is permissible. Second, courts should encourage expert testimony from art scholars on whether the works in question are meritorious appropriation art or not, allowing judges to resume their historic reluctance to evaluate visual art. Finally, Congress should revise the Copyright Act to narrow the scope of fair use for visual artists to reproductions, eliminating the current confusion between the protected transformative use defense and the infringing transformation of original works within the scope of the artists' derivative rights. Taken together, these three changes will restore clarity to the question of how artists can create new works without infringing the rights of other artists. This increased clarity will allow artists to stop litigating and focus their attention on creating, a development that all parties should favor.

A. Recognize Appropriation Art as Transformative Use Per Se

As a first element of this tripartite solution, courts should accept meritorious appropriation art as transformative *per se*. In other words, courts should determine – preferably with the assistance of expert testimony, as described in the following section – whether the accused work is meritorious appropriation art. If so, the court should take that determination into account when evaluating the first of the fair use factors. The second, third and fourth factors should remain open to the court's analysis, without a correlative presumption.

In the past, courts have been reluctant to supplant the entire four-factor analysis with a broader presumption that appropriation art should be considered *per se* fair use. In *Morris v. Guetta*, for example, the Central District of California Appellate Court ruled that Guetta's adjustments to photographs of Sid Vicious

taken by Dennis Morris constituted copyright infringement.[174] The court rejected Guetta's argument that appropriation art should be considered fair use *per se*: "[t]o permit one artist the right to use without consequence the original creative and copyrighted work of another artist simply because that artist wished to create an alternate work would eviscerate any protection by the Copyright Act."[175]

Prior to *Cariou*, a few scholars proposed unique fair use standards for appropriation art, but none were adopted. In 1988, for example, John Carlin suggested modifying fair use standards to better accommodate appropriation art.[176] Instead of the standard four-factor test, Carlin suggested focusing on the purpose of the copying and the nature of the work copied.[177] Carlin's test, however, applied different standards depending on whether the copied image was recognizable to the average viewer.[178] Carlin also limited his proposed fair use determination to the appropriation of works whose creator was no longer living or actively exhibiting his work.[179]

In 1993, E. Kenly Ames proposed a different approach to fair use in appropriation art cases.[180] Ames would have limited the presumption of fair use to works of visual art as defined under the Visual Artists' Rights Act of 1990 (VARA), in part to "avoid any need to decide whether it is 'good art,' or even 'art' at all, or whether it is successful in getting its critical message across to the viewer." [181] She further proposed a minimal standard of review for the appropriating work's effect on the potential market for the original work, suggesting that such appropriation should be deemed fair so long as the secondary work cannot reasonably function as a market substitute for the original. [182]

Both Carlin and Ames' proposals recognized that appropriation art required different legal treatment from more traditional 19th century forms of image creation, but their standards would have been relatively difficult to implement.

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[174] Morris v. Guetta, No. LA CV12-00684 JAK (RZx), 2013 WL 440127, at *8 (C.D. Cal. Feb. 4, 2013) (rejecting defendant's fair use defense to plaintiff photographer's copyright infringement claims).

[175] *Id.* at *13.

[176] Carlin, *supra* note 16, at 137-38.

[177] *Id.* at 139.

[178] *Id.*

[179] *Id.*

[180] *See* Ames, *supra* note 161, at 1515-1516.

[181] *Id.* at 1518-1519.

[182] *Id.* at 1523.

Carlin's qualification that recognizable works deserved more protection introduces the unwieldy question of what an "average viewer" recognizes, and answering such a question is no easy task in a culture that is increasingly subdivided in terms of what people see and recognize. Ames' proposal introduces the excellent notion of using the VARA standard to remove the subjective evaluation of art from the courts, but would apparently allow that determination to override the consideration of the other four fair use factors. However, a better approach would allow courts to deem appropriation art that falls under a minimal VARA standard to be transformative use, while retaining consideration of market impact and other important fair use considerations and without allowing any one of those considerations to dominate.

A critical question is how much transformation of a source work is necessary to qualify as appropriation art, and therefore transformative use *per se*, under this proposal. This question plagued the Second Circuit in *Cariou* as well. In its decision, the majority determined that most of Prince's work qualified as transformative use without specifying the standards used to reach that determination. While some of Prince's works transformed Cariou's photographs beyond judicial doubt, other works were too close to call. As Judge Parker noted with regard to one work, *Graduation*:

> Prince did little more than paint blue lozenges over the subject's eyes and mouth, and paste a picture of a guitar over the subject's body... Where the photograph presents someone comfortably at home in nature, *Graduation* combines divergent elements to create a sense of discomfort. However, we cannot say for sure whether *Graduation* constitutes fair use or whether Prince has transformed Cariou's work enough to render it transformative.[183]

The court remanded the question of whether Prince was entitled to the fair use defense for Graduation and four other works, but failed to provide any clear standards by which to make that determination. It is hard to see how the lower court would be any more qualified than the appellate court to make this determination, unless additional testimony was permitted on this point. Even so, it would have been difficult to introduce such testimony absent standards of proof.

When a work is appropriation art, it is creative and progressive. It is "not premised on rote copying," but is instead "about quotation, recontextualization,

[183] Cariou v. Prince, 714 F.3d 694, 701-11 (2d Cir. 2013).

and criticism – the very building blocks of artistic progress."[184] The Copyright Clause of the Constitution, after all, authorizes Congress to promote the Progress of Science and useful Arts.[185] Because genuine appropriation art represents artistic progress, it is "the sort of innovative criticism and reassessment of our environment that one might argue the Copyright Act is designed to protect."[186] For that reason, it deserves at least *per se* protection as transformative use.

One way to remove judges from their newly adopted and ill-suited role as art critics is to create a brighter line between what does and does not infringe a source artist's copyright. Given the prominent role of appropriation art in the modern art canon, the time has come to recognize it explicitly in the context of copyright law. The simplest bright line to use is the term Congress has already adopted in another copyright statute designed to protect artists: VARA.[187] In adopting a relatively simple standard for basic protection, VARA relieves courts of the responsibility they are ill equipped to bear: making aesthetic judgments and determinations of artistic worth.

B. Broaden the Use of Expert Testimony By Art Scholars in Infringement Cases

Another way to restore the proper distance between judges and art evaluators is to expand the use of qualified expert testimony in visual art copyright infringement cases. Judges should not be in the business of judging art. The Second Circuit's foray into artistic evaluation in *Cariou* appears to have been entirely subjective, since it did not specify any standards used to determine that twenty-five of the accused paintings were fair use and five were too close to call.[188]

I propose instead that courts invite expert testimony on the issue of whether an accused work is meritorious appropriation art, mere copying without more, or something in between. Specifically, my proposal is that parties to copyright infringement cases involving appropriation art retain experts to testify as to whether the allegedly infringing work is meritorious appropriation art or not. Other scholars, most notably Monika Jasiewicz, have recently suggested inviting expert testimony on whether an artistic use is transformative so as to qualify for the fair use defense.[189] Although it is grounded in many of the same concerns, my

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[184] Jasiewicz, *supra* note 11, at 147.
[185] U.S. CONST. art 1, § 8.
[186] Jasiewicz, *supra* note 11, at 151.
[187] 17 U.S.C. § 106A (2006).
[188] *Cariou*, 714 F.3d at 708-711.
[189] *See* Jasiewicz, *supra* note 11, at 146.

proposal is narrower in that it calls for a parallel *per se* determination of transformativeness for appropriation art.

Expert testimony is necessary in appropriation art cases because of its unique forms of expression, interpretation and meaning. It is harder for judges to evaluate the fair use of art than other kinds of copyrightable expression. This is especially true for appropriation art, which has its own canon and semiotics. While judges are likely to be familiar with the conventions of parody and jokes present in literary works, they are less likely to have a comparable understanding of the conventions of photography and appropriation art, because those conventions lay farther outside the popular discourse.[190]

As *Cariou* illustrates, the current "new expression, meaning or message" test is difficult at best to implement without expert assistance. Any new depiction of a source work that varies even slightly from the original, for example, might qualify as "new expression" in that it differs from the original expression. Even if courts were to narrow the "expression" element of the current test, it is challenging to define transformative use in the visual art medium. It is significantly harder to define the "meaning or message" of a visual artwork than to define the "meaning or message" of a written work, in part because visual art is less literal by nature. There can be no single meaning of a work of art, as so much of the interpretation of a work rests with the observer.[191]

Judicial opinions are also a poorer vehicle for conveying the bases of a transformative use determination in cases involving the visual arts than those involving written works. As Matthew Bunker and Clay Calvert have observed, the "perception of whether something constitutes a written parody may be more reasonably gleaned and more readily explained in a judicial opinion than the perception of whether image-based appropriation art is transformative."[192]

Indeed, judges' willingness to engage in aesthetic judgments in the course of legal judgments is a relatively recent phenomenon. In *Bleistein v. Donaldson Lithographing Co.*, Justice Holmes observed that

> It would be a dangerous undertaking for persons trained only to the law to constitute themselves final judges of the worth of [works] … if

[190] Bunker & Calvert, *supra* note 11, at 127.

[191] *See, e.g.*, Alex Kiefer, *The Intentional Model in Interpretation*, 63 J. AESTHETICS & ART CRITICISM 3, 271-281 (2005).

[192] Bunker & Calvert, *supra* note 11, at 127.

> they command the interest of any public, they have a commercial value – it would be bold to say that they have not an aesthetic and educational value, – and the taste of any public is not to be treated with contempt.[193]

Holmes' statement underscores an important limitation on judges' ability to interpret art in copyright cases. So, too, did Judge Wallace's dissent in the Second Circuit's *Cariou* ruling, belying his discomfort in the role of art critic. Citing a cautionary note from the Supreme Court in the *Campbell* case that "it would be a dangerous undertaking for persons trained only to the law to constitute themselves final judges of the worth of [a work], outside of the narrowest and most obvious limits,"[194] Judge Wallace wrote that "[i]t would be extremely uncomfortable for me to do so in my appellate capacity, let alone my limited art experience."[195] His hesitation to engage in art criticism is well-reasoned, and should be instructive to courts in general.

Nor should artists be in the business of judging their own art. Several observers have pointed out the difficulties inherent in asking artists to comment on their own intention in creating works at issue.[196] While an artist's intent should not be viewed as dispositive, *Cariou* can be read to suggest that it is not even relevant. After all, in *Cariou*, the District Court interpreted Prince's testimony to mean that he had no transformative intent.[197] But it is not artists' potential inability to articulate their intent that is the problem. Indeed, any witness has the potential to be inarticulate. Dealing with that possibility is one of the trial lawyers' responsibilities.

The larger problem is that the artist's perspective and intent is irrelevant to the commercial impact of the alleged copying, which is at the heart of the first and fourth factors of the fair use defense.[198] Scienter need not be part of a fair use determination. Whether an artist like Prince can articulate a transformative intent behind his work is not determinative of whether his work is appropriation art. As

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[193] Bleistein v. Donaldson Lithographing Co., 188 U.S. 239, 251-252 (1903).

[194] Cariou v. Prince, 714 F.3d at 714 (*citing* Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 582 (1994) (*quoting Bleistein*, 188 U.S. 239, 251 (1903))).

[195] *Id.*

[196] *See, e.g.*, Caroline L. McEneaney, *Transformative Use and Comment on the Original: Threats to Appropriation in Contemporary Visual Art*, 78 BROOK. L. REV. 1521, 1543 (2013).

[197] Cariou v. Prince, 784 F. Supp. 2d 337, 349 (S.D.N.Y. 2011), *rev'd in part, vacated in part*, 714 F.3d 694 (2d Cir. 2013).

[198] *See* 17 U.S.C. § 107 (2006).

Caroline McEneaney has written, "[t]he creator often sees the work very differently from others and rarely has a true sense of the legal consequences of his own words … To rely so heavily on the testimony of the artist leaves society's exposure to valuable cultural reference in the hands of art makers, who are not versed in the law, have very different perspectives than judges and lawyers, and may not realize the impact that their words can have."[199]

In many ways, the need for expert testimony in visual art copyright infringement cases can be compared to the need for expert testimony in patent cases, which have been standardized in claim construction hearings.[200] In such hearings, courts benefit from expert testimony from each side as to the proper construction of certain terms in the claims at issue. In patent infringement litigation, courts accept the need for expert testimony on the technical details of patented inventions because the technology is so specialized, as it must be to be patentable, that no judge can be expected to appreciate the perspective of "one of ordinary skill in the art" of the patent. This is true regardless of whether the judge sits in a court of general jurisdiction or a specialized court like the Federal Circuit. Judges are no more, or at least not much more, qualified to interpret appropriation art than they are to interpret the workings of a nonvolatile semiconductor memory device with an improved gate electrode.

When courts use expert witnesses to help evaluate transformative use in the visual arts, it is critical to circumscribe their testimony. Such experts should testify only to whether the accused works meet a specific standard. This article proposes that the standard be whether the accused work is meritorious appropriation art, as described in the preceding section.

There is a danger that expert testimony on transformative use will focus on the market value, if any, of the accused and original works. Indeed, the Second Circuit's *Cariou* opinion included an extensive discussion of the market differences between Prince's work and Cariou's work.[201] This kind of testimony should be avoided. Indeed, such testimony might flow naturally from Section 107's emphasis on the market. The first factor asks whether the accused work's use of the original is "of a commercial nature or is for nonprofit educational purposes," while the fourth factor focuses on "the effect of the use upon the

[199] McEneaney, *supra* note 197, at 1543.
[200] *See* Markman v. Westerview Instruments, Inc., 517 U.S. 370 (1996).
[201] Cariou v. Prince, 714 F.3d 694, 709 (2d Cir. 2013).

potential market for or value of the copyrighted work.[202] Transformative use, however, is usually considered to affect the determination of the first fair use factor alone.[203] An important constraint of these proposals is that they allow the court to consider the other three factors of fair use independently.

One danger of allowing marketability and market value to influence the determination of transformative use is the possibility of offering greater protection to expensive artists than to lesser known artists. While art can be big business, the price tag of a work should not influence the determination of whether it is either transformative or infringed. Given the shift in judicial attitudes evidenced in *Cariou*, this is a real concern. As noted above, the Second Circuit's decision hinged in part on a finding that Cariou appealed to a different "sort of collector" than Prince. It observed that

> Certain of the *Canal Zone* artworks have sold for two million or more dollars. The invitation list for a dinner that Gagosian hosted in conjunction with the opening of the *Canal Zone* show included a number of the wealthy and famous such as the musicians Jay-Z and Beyonce Knowles […] *Vanity Fair* editor Graydon Carter, *Vogue* editor Anna Wintour, […] and actors Robert DeNiro, Angelina Jolie and Brad Pitt [...] Cariou on the other hand has not actively marketed his work or sold his work for significant sums, and nothing in the record suggests that anyone will not now purchase Cariou's work, or derivative non-transformative works (whether Cariou's own or licensed by him) as a result of the market space Prince's work has taken up. This fair use factor therefore weighs in Prince's favor.[204]

While the Court's analysis is limited on its face to the fourth fair use factor, it is impossible to ignore the air of snobbery implicit in its assessment. Contrast this with the Second Circuit's opinion in *Rogers v. Koons*, in which the court derided the arrogance implicit in the assumption that wealth insulates an artist from infringement allegations:

> The copying was so deliberate as to suggest that defendants resolved so long as they were significant players in the art business, and the copies they produced bettered the price of the copied work by a

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[202] *See* 17 U.S.C. § 107 (2006).
[203] *See Blanch*, 467 F.3d at 251; *Campbell*, 510 U.S. at 579; *Cariou*, 714 F.3d at 705-706.
[204] *Cariou*, 714 F.3d at 709.

> thousand to one, their piracy of a less well-known artist's work would escape being sullied by an accusation of plagiarism.[205]

The difference in these opinions indicates just how far the Second Circuit has slid toward accepting exactly the kind of privilege that it had derided in *Rogers v. Koons*. It also underscores the importance of eliminating (or at least minimizing) the effect of power and wealth on the scope of an artist's rights. To allow market value to infect the transformativeness decision would be to perpetuate the danger that only the wealthy can afford justice. If only highly marketable artists can protect their work in court, then we as a society effectively will be determining that lesser-known artists have fewer rights. That is inapposite to copyright's constitutional mandate "to promote the Progress of Science and useful Arts." We should not equate artistic value with commercial value.

What kind of experts should be employed? The experts testifying in transformative art cases could be art critics, art historians, or other professionals with expertise in the types of art at issue. One danger of employing gallerists and art dealers as experts instead is the possibility that their knowledge of the market and of relative value will unduly influence their opinion as to whether the accused work is meritorious appropriation art. While there need not be a bright-line exclusion of art market players from this kind of expert testimony, courts should guard against allowing market value to influence their opinions as the Second Circuit arguably did in *Cariou*.[206]

C. Limit Visual Artists' Derivative Rights to Reproduction Rights

The third element of this proposal is to amend the Copyright Act to limit the scope of derivative rights for visual artists to reproductions of their work, within limits. Authors' derivative rights in the characters they create make sense in ways that artists' derivative rights in the particular work do not. The visual image is the creative work itself. Characters, on the other hand, exist independently of the specific words used to create them.

Under the terms of this proposal, artists would retain derivative rights in reproductions of their works, including variations in size, format, materials and coloration. The reproduction of a work on a t-shirt, a poster, or a website would not qualify as transformative and, presumably, would not be fair use in most cases. Allowing for these minor differences in expression of the work is also consistent

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[205] *Rogers*, 960 F.2d at 303.
[206] *Cariou*, 714 F.3d at 709.

with the sensible outcomes of cases like *Friedman v. Guetta*.[207] In that case, Ron Friedman sued Thierry Guetta for copyright infringement based on Guetta's use of Friedman's photograph of the hip-hop group Run D.M.C. Guetta asserted the fair use defense, and lost. The court rejected the claim that Guetta's adaptation of the photograph was "transformative" even though his work differed in minor ways from Friedman's.[208]

Put simply, this limitation would help bring copyright law into line with the reality of appropriation art. If courts continue to engage in subjective analyses of how much variation of an original work is transformative, the doctrinal chaos advanced by *Cariou* will continue to confuse artists and scholars. Only those artists wealthy enough to roll the legal dice will be able to risk an infringement decision (especially if their pockets are deep enough to afford appellate counsel). The majority of artists cannot afford to take those risks. The uncertainty caused by diffuse standards may chill the creation of new works, depriving society of the "progress of the … useful arts" that the Constitution seeks to protect.[209] It may also result in fewer source works for artists to appropriate in future years.

Restoring a bright line, even one that is more conservative than that established by the current case law, will provide the certainty artists and art markets need. The scope of rights suggested here squares with case law, including *Cariou*, and has the benefit of being both simple and realistic.

To be sure, some reproductions of copyrightable works will still be found to be fair use, for example, where the reproduction serves a different purpose from the original work.[210] And reproduction may still be found to misappropriate an image even where it is surrounded by original creative elements, as was the case in *Hart v. Electronic Arts*.[211] As a general principle, however, limiting the derivative rights of visual artists to reproductions with minimal variations will help restore the proper boundaries between derivative and transformative use in this sphere.

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[207] Friedman v. Guetta, No. CV 10-00014 DDP (JCx), 2011 WL 3510890 (C.D. Cal. May 27, 2011) at *7.

[208] *Id*. at *6.

[209] U.S. CONST. art 1, §8.

[210] *See, e.g.*, Perfect 10, Inc. v. Amazon.com, Inc., 508 F.3d 1146 (9th Cir. 2007) (holding that framing and hyperlinking as part of image search engine constituted fair use of Perfect 10 images because the use was highly transformative).

[211] Hart v. Elec. Arts, Inc., 717 F.3d 141, 159-69 (3d Cir. 2013).

CONCLUSION

Reforming the determination of transformative use in this comprehensive manner is necessary to reign in the fragmentation of precedent that has left artists, scholars, and investors wondering what transformative use means now. The *Cariou* decision and other recent cases expanding the application of the fair use defense are cause for concern, not just in the multi-billion dollar global art market but for the preservation of the creative process in general. The explosion of images available on the internet feeds the development of appropriation art, demanding a legal treatment that fairly defines the rights of all players in this market.

Copyright law (like all intellectual property law) seeks the right balance between rewarding the creators of new works and ensuring that those works can be used appropriately by the public, and it must adapt to evolving technology. By allowing appropriation artists apparently unfettered access to copyrighted materials, judicial decisions like *Cariou* threaten the incentives of more original artists to create the sources on which appropriation art depends. Left unchecked, it will continue to plague the art market, adversely affect lesser known artists, and entrust the legal boundaries of creative expression to the wide range of judicial discretion. Given the likely doctrinal, commercial and societal effects of these cases, there is a need for comprehensive reform.

The proposals set forth in this article will clarify the rights of appropriation artists and source artists as well as the proper roles of judges and experts in 21st century art copyright cases. The first proposal, treating meritorious appropriation art as transformative use *per se*, removes the uncertain element of judicial subjectivity that currently makes it hard for artists to know *a priori* what their rights are when accusing someone or being accused of copyright infringement. It also allows courts to retain consideration of purpose, market impact, and other more easily determined elements of a fair use defense.

The second proposal, encouraging the use of expert witnesses to determine whether the accused works meet the appropriation art test, acknowledges the limits of judges' ability to evaluate the visual arts to the same extent that they can evaluate written works. It also dampens the likelihood that socioeconomic factors will play a large part in the court's determination of what is and is not protectable, although the costs of litigation will always affect access to justice to some extent. The third proposal, limiting source artists' copyright essentially to reproductions of their work, makes sense for the proper balance of rights in the visual arts context and is necessary for the first proposal to work well.

This comprehensive set of reforms is necessary to restore much-needed clarity to the art world and to bring copyright jurisprudence into line with current ways of making and understanding art. As technology continues to multiply the images available for artists to work with and simultaneously fractures the viewing public into an infinite number of sub-communities, the tripartite reform proposed here is not only warranted but critical to align the interests of artists, consumers, copyright lawyers, and courts alike.

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THE INTERVIEW:

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Barton Beebe is the John M. Desmarais Professor of Intellectual Property Law at NYU School of Law.

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BB: My first question is how did you become involved in the practice of art lawyering?

JK: I began in 1973 when I first represented an artist in a pro-bono matter. I was at a large law firm Rogers & Wells, and I thought it was really gratifying to help a marvelously creative person. Then I got involved with the City Bar Association and with writing legislation. Going to the Museum of Modern Art (MoMA) as its general counsel in 1979 was the legal turning point for me that set me down the path that I have been on. After leaving MoMA, I simply started representing only artists and galleries.

BB: And what is it like representing artists now?

JK: It's terrific. It's the thing I missed the most at MoMA because I had very little involvement with artists. Even today when I represent a lot of other arts businesses—such as Artforum Magazine and other arts related businesses like that—it's the artists that are always the heart and soul of what I do.

BB: Is it possible to say the practice has changed over the years? I realize it's a broad question, but are there thematic changes you noticed in general and in the business of art lawyering?

JK: I would say that there is more understanding that law is involved. In 1982 when I began practicing art law full time, there were no contracts with galleries and very little other documentation, regardless of the size of the transaction. Since there is more money involved now, you see more paperwork and more concern on the part of collectors. There are more lawyers involved now which brings more contentiousness to everything. Since legal fees have not evolved to become a significant or reliable profit center for large law firms, you do not see those firms pursuing this business. So there are few that do. But even for those that do, I doubt it is at the heart of any of those firms. Art law still has more PR value to law firms than substantial economic value.

BB: Do the artists have good business sense when they come to you?

JK: There's an amazing range, from those who are incredibly businesslike to those who are completely un-businesslike. So there really is a wide variety. And that's one of the things that I find so interesting, you never know where the new artist client is going to be on that spectrum.

BB: Are artists more attuned nowadays to intellectual property than they used to be?

JK: Yes.

BB: Do they know, for instance, copyright versus trademark or do they just sort of know that they've got rights?

JK: Attuned was the word you used, and to me attuned means aware that copyright is an issue. Because copyright infringement claims have received a certain amount of visibility, artists are aware that copyright law is a potential problem. Art schools now have courses that cover copyright and a lot of outreach from various sources trying to educate every segment of the art community through numerous forums. The word is spreading out there to artists that this is something that intellectual property laws are something that they need to take into account.

BB: Do you think that art is viewed almost more like a business now than it was before?

JK: People become artists not because of the business angle; they mostly do it out of a passion. While it is hard to generalize among this incredibly disparate group, I think people become artists because that's what they want to be and they feel like they have something to say. That said, it does feel as if business is more a part of being an artist than when I started in 1982.

BB: Is it fair to say that as they become more and more successful, they might become more and more attuned, and also more and more sophisticated about intellectual property issues?

JK: Mmm, no. As artists get more successful, they become more of a target. Maybe they also begin to spend a little bit more time on business matters

and start becoming more businesslike. If you're not making any money and all you're doing is making art, business concerns are quite secondary.

BB: Now a very broad sort of academic kind of question, which a lot of people always wonder about. Does copyright law, in your view, incentivize anything in the art world?

JK: No. Absolutely not. But I'll make a distinction. I do think that in the text world, for authors, copyright law is an incentive and especially regarding the all-important subject of derivative uses, speaking of that horrible term in the copyright law.

BB: Why are the problems you see with derivative uses?

JK: Copyright capitalists seek to use the definition of a derivative work to restrict fair use because the word "transformed" happens to be in the statutory definition. This unfortunate confluence of concepts has become problematic as transformation has taken on such a significant role in determining fair use. In my view, the reach of the derivative use right should extend only to adaptive uses that the author would have likely or plausibly pursued as part of the incentive to create and distribute for the public good.

BB: You mentioned earlier that copyright is more important in a medium like writing. Can you elaborate?

JK: Well, it's a point that comes up whenever someone is advocating a resale royalty for visual art. There is a real difference between the way a book and music are distributed. The author receives a royalty based on multiple copies of the work. Multiple copies are rewarded by copyright. So, fundamentally, when you have a certain product with the potential for wide distribution through multiple copies, copyright allows the author to exploit the product commercially. This is different than a single work of art that is sold for a full retail purchase price and whoopee on to the next sale of another work.

BB: And is it the practice that most visual artists will retain the copyright in the work even though they sell the physical version of it?

JK: Absolutely. Absolutely. Although with commissioned work, the bigger the commissioning party, the more aggressive they are about owning the copyright. But you fight back, as hard as you possibly can.

BB: Have you seen a change in the way artists approach IP law or the way that art lawyers approach IP law given the internet and things now being more accessible and easier to copy?

JK: When I think about the internet I think about two things. First, I think about the sensitivity and fear on the part of someone who has created a work that once it is published digitally, it's out there and there's no going back. I don't think that gets anybody to hold back because artists really want their work to be seen. It's just a matter of being more aware of how, puff, there goes your work out to the world. The other side of the thought is how important the internet is as source material, and in turn why fair use is so important.

BB: Has the role of an artist changed over the years as a result of the internet and this new access to material?

JK: Role is the wrong word. I don't think the role of the artist has changed. Certainly the subject matter and the direction has changed to some extent. But the endeavor is still a devotion to visual expression. Marcel Duchamp is a good example of a significant shift in direction based on new material followed by many artists after him, he did not produce any shift or change in the role of the artist.

BB: But now artists are working with a lot more subject matter, like images from popular culture, that is already propertized.

JK: That's right. And copyright was also narrower way back when. Now, everything is subject to copyright protection, which is why fair use is so important, because copyright protection is so much easier to obtain. It is automatic, it is forever, and it keeps expanding.

BB: So let's talk about the case law then. What do you think of the *Cariou v. Prince*[1] outcome?

JK: Great. Excellent. As you know, there are some problems. I worry a little bit about taking the law too far, causing future case outcomes to cut back. For example, the 7th Circuit recently said "We're skeptical of *Cariou*'s approach, because asking exclusively whether something is 'transformative' not only replaces the [other fair-use factors] but also could override 106(2), which protects derivative works."[2] When you go really far out taking away the four factors and turning the determination into one analysis, that may be going a little bit too far. I'm thrilled that the pendulum has moved in favor of fair use, but I worry.

BB: You accept that the pendulum has shifted then from the old days of *Rogers v. Koons*?[3]

JK: Are you kidding? Huge. And, it's all due to *Campbell*.[4] *Campbell* was the change.

BB: *Campbell* was 1994 and *Rogers v. Koons* came before it in 1992.

JK: Absolutely. *Campbell* however was a parody case. Coincidentally one of the confusing things about *Rogers v. Koons* is the parody argument that was made and the response of the Court to this argument. Since *Campbell*, Souter's analysis has been modified so that there is no longer any satire/parody distinction.

BB: After *Campbell*, it did seem that people could read *Campbell* as establishing this pretty clear distinction that parody is okay and satire is not, so you've got to fit your work into the parody box.

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[1] Cariou v. Prince, 714 F.3d 694 (2d Cir. 2013).

[2] Kienitz v. Sconnie Nation LLC, 766 F.3d 756, 758 (7th Cir. 2014).

[3] Rogers v. Koons, 960 F.2d 301 (2d Cir. 1992).

[4] Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569 (1993).

JK: That is what I tried to do in *Rogers v. Koons*. Unfortunately at that time I was dealing with precedent that was not very helpful. The two Supreme Court decisions were *Sony*[5] and *Harper Row*.[6] And they were bad cases for defending Jeff's work, even though *Sony* ruled in favor of fair use. I was trying to get the judge to understand Jeff's artistic expression as something that ought to be within the safe harbor that the parody decisions provided. Transformation was not a factor or consideration in *Rogers*. Transformation wasn't part of the lexicon. That did not come until later, until *Campbell*. Judge Leval's article[7] was June 1990, and so we didn't have that article to cite to Judge Haight in the district court. We cited it to the Second Circuit on appeal. But it was only a law review article, even if the author was a judge. Souter made it important in *Campbell*.

BB: And what about in *Prince*?

JK: Prince was incredibly fortunate on his appeal to the Second Circuit. He got hammered in the district court. Possibly reacting to the lower court's dismissiveness, the panel decided that it did not matter that Prince wasn't commenting. Judge Parker almost entirely relied upon transformation as the decisive determination.

BB: Judge Parker found, in essence, that the fact that Prince did not provide any explanation of what he intended by his work was not dispositive.[8] Prince doesn't have a good story to tell about what he intended his work to mean, about how he might have intended to comment on Cariou's work, but we don't care about that. We're just going to look at Prince's work to assess transformativeness.

JK: Yes. One of things that has always been important to me ever since *Rogers* is that Judge Cardamone said that I argued that a mere change in medium was sufficient to exempt a work from being infringing. This

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[5] Sony Corp. of America v. Universal City Studios, 464 U.S. 417 (1984).

[6] Harper & Row v. Nation Enterprises, 471 U.S. 539 (1985).

[7] Pierre N. Leval, *Towards a Fair Use Standard*, 103 Harv. L. Rev. 1105 (1990).

[8] *Prince*, 714 F.3d at 707.

demonstrates the hazard of trying to get a nuance across sometimes. I was simply trying to say that changing the medium was significant especially for visual expression. This change made the sculpture a very different work. I've gone back and forth on this. Was that a good argument or bad idea. If you make that point too big a deal, you then run the risk of going in a bad direction, as opposed to just strictly discussing the four fair use factors as they then existed. But I thought it was important for the court to realize that these were very different expressions—and remember, this was pre-*Campbell*. Once you take a work from two dimensions and make it three-dimensional, you really change the expression of the subject. I often think about a sculpture I once saw that was derived from a famous photograph of a girl following the 1970 Kent State tragedy with her arms spread out over a dead student's body. The sculpture was just the girl, a three-dimensional sculpture, Duane Hanson-like, and naked. It was an exact look-alike. I said to myself, I really need to have this example of what should be fair use. The artist took heart out of the photograph, but the sculpture is a completely different expression. And it's an amazingly powerful statement. So changing medium should be significant, but not absolute.

BB: Does the *Prince* approach then invite aesthetic discrimination by judges?

JK: I hope not. I don't think it requires differentiation on the basis of artistic merit. I don't think judges are in a position to do that. Necessarily, decisions are made by human beings who have tastes, prejudices and experiences. That's not going to change. But artistic merit should not be part of the assessment. Therefore it should not matter whether a judge has some artistic sensibility or not. Experts should not matter, although having said that, I'm going to almost take back my statement because I do think that experts can instruct on some of the messages and meanings in the work. In *Rogers v. Koons* we had affidavits of three leading experts in the contemporary art world. Kathy Halbreich , currently the Associate Director of the Museum of Modern Art, John Caldwell then a highly regarded expert at SF MoMA, and the eminent Robert Rosenblum from NYU. These were all leading people and they were all explaining the Koons sculpture to Judge Haight and to the

Second Circuit. But poof, the judges could care less about what experts had to say. A decade later in In *Blanch*, [9] not a single expert was offered, just Jeff saying what his work was all about.

BB: So the parody analysis could allow the court to avoid making a decision on whether the art is meritorious. The artist could voice his or her opinion. So if you have Jeff Koons talking about the transformative nature of the *Blanch* piece, then it allows the judge not to have to step in and make an aesthetic judgment or rely on an expert's opinion.

JK: Well the judge should be able to ascertain whether there is really a new message, a new meaning, a purpose to it and hopefully without that silly business about explaining why the artist had to pick this particular source. That is one of the worst distractions that you get in these cases: the plaintiff arguing "you could have picked something else; you didn't have to pick this one." That said, if the artist can provide some insight, it does help the cause. Even though under *Prince v. Cariou* it doesn't matter anymore, if I were advising someone, and notwithstanding *Prince v. Cariou*, I would say it is worthwhile to explain your work, somewhat. Especially since some of the courts criticize the artist for an ad hoc explanation. For example in *Morris v. Guetta*[10] a case involving a photograph of Sid Vicious, the court rejected the artist's explanation saying "you're just making this up now." So even if the artist slips in some contemporaneous explanation as simple as "I thought I had to say something about Mickey Mouse because…", it could help. I wish the artist did not have to offer any justifications but it can help.

BB: We have the case in trademark law in which the artist Tom Forsythe[11] explained exactly why we had chosen to photograph the Barbie doll. It was perfect.

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[9] Blanch v. Koons, 467 F.3d 244 (2d Cir. 2006).

[10] Morris v. Guette, No. LA CV 12-00684 JAK RZX, 2013 WL 440127 (C.D. Cal. Feb. 4, 2013).

[11] Mattel, Inc. v. Walking Mountain Prods., 353 F.3d 792 (9th Cir. 2003).

JK: Great case, great outcome. Best part was the attorney's fees portion,[12] which I wish would still happen more often so that there would be fewer lawsuits.

BB: Do you think there should be more fee shifting in copyright and trademark litigation?

JK: I think that prevailing defendants should receive an award of attorney's fees more often as a disincentive to the litigation of meritless claims, especially those lacking any injury.

BB: What if the plaintiff is a small time figure though, and is dissuaded from suing a big artist because the plaintiff's worried about fee shifting.

JK: Well that's the American system and why we have it the way we have it. I think that the way it exists in copyright law is just right. In other words, you have to have a prior registration to get statutory damages and attorney's fees, which I believe is just right because it means you have to do something to indicate in advance that the work you have created has value to you regarding potential alternative uses. It's not automatic. Then if you have done that simple, inexpensive act, the system will reward you. And on the other hand, if you pursue a bogus case, you get hammered. And since it was a company like Mattel that brought the lawsuit, it was especially gratifying that it was severely punished for doing so. In *Blanch* we made a motion for attorney's fees, but we abandoned it because we really didn't think the judge was going to punish the plaintiff. But a huge award of attorney's fees would have been perfect in *Fairey v. The Associated Press*.[13]

BB: How?

JK: AP should have lost big time in that case. They deserved to solely lose on the merits and to have had attorney's fees assessed against them.

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[12] *Id*. at 816.

[13] Fairey v. The Associated Press, No. 09-CV-01123 (AKH) (S.D.N.Y. filed Feb. 9, 2009).

BB: A lot of people didn't sympathize with Fairey because he lied to the court.

JK: That's how he was forced to abandon his defense of the case, and it did strip away much of the sympathy for him. But take that mistake out of it, Fairey's use was fair use pure and simple. And the fact that AP wasn't even the photographer was an embarrassment to the Associated Press in my opinion. The case also had another part of fair use that I have been very, very keen on seeing develop, but has fallen by the somewhat wayside. That is the idea of copyright being thin or fat. I strongly believe in the importance of that assessment. The copyright in the Garcia photograph was as thin as it gets.

BB: Low creativity?

JK: Absolutely. And especially when Fairey has painted it over and put a message on it. I think that the second fair use factor in the Fairey case should have weighed strongly in favor of Fairey. On the other hand, I believe that highly creative uses should have more protection.

BB: The harder the artist works, the more sweat of the brow she puts into something, the wider the scope of protection she should get?

JK: Absolutely, in terms of creativity.

BB: But does that work against artists who engage in very minimalist or conceptual art?

JK: I don't see why.

BB: The judge looks at a blank white canvas and says, "What's this"?

JK: Well, that's going to be a problem with judges and art generally. Judges can and will understandably look at art and like what they see or dislike what they see. I don't think that cuts against my point about creativity.

BB: Back to *Cariou v. Prince*. Judge Parker for the majority writes that we should use the reasonable observer standard to decide whether the defendant has transformed the plaintiff's work. Judge Wallace in his concurrence/dissent, applying the *Bleistein*[14] language, objects, asking, "who are we to say twenty-five of these are transformative but five of these have to be sent back?"

JK: Judge Wallace said that this factual question ought to be decided by the trier of fact in the first instance, under proper guidelines. I think he was being a purist about it. I believe that the majority was trying to get the case settled, which is why they split it the way they did. Cut the case down to five works and let them fight about those five.

BB: A criticism of the *Prince* majority opinion is that it overemphasized the idea that the defendant must have "usurped" the market for the plaintiff's work. In the court's analysis of the four-factor test, the court referred to the invitation list for one of Prince's art openings to determine the effect on the market. The court was basically saying to Cariou: "Prince is an art star. You're little people. Who do you think you are to suggest that you are in the same market as this guy?"

JK: That was bad. That was bad. I was really sorry to read that, and it taints the opinion unfortunately. That should be meaningless. While they did use this fact from the record to indicate or observe that there were two different markets, because of the references to those celebrities the important point becomes diminished.

BB: To shift gears, what do you think of the four-factor fair use test? Is it working?

JK: I think the factors are just fine. While [the third factor's] "amount and substantiality" never really factors in much, it's good to have it because there could be a total taking and that would allow the court to heavily weigh that one fact. And the thought of Congress fritzing around with § 107 is a

[14] Bleistein v. Donaldson Lithographing Co., 188 U.S. 239 (1903).

nightmare. I also believe the determination was lopsided when the fourth factor was said to be the most important consideration.

BB: The fourth factor, involving the effect of the defendant's use on the market for the plaintiff's work, is often criticized for being circular. To the extent that the defendant uses the plaintiff's work in some way, doesn't that imply that the plaintiff's work had value to the defendant for which the plaintiff could have charged a licensing fee?

JK: No, although the circularity is always there and frequently is problematic. I do not believe that the source work has economic value simply because an artist sees it as being useable to make the statement that the artist wants to make. That's why the "you should have picked another source" argument should be meaningless. You want to give a broad latitude to artists to make new works. Another very good feature of the decision in *Cariou v. Prince* is its focus on the actual market, not speculative markets. What are the actual markets that are being affected? And the answer in *Cariou* was none, and the answer in *Rodgers* was none, and the answer in *Blanch* was none. In most art cases the answer is none because there is no licensing market for what they call an art reference. If you look at some market instruction books even those published by the likes of the ASMP,[15] the fee for an "art reference" is two hundred dollars. And these organizations are trying to beef up licensing fees. The market is not a big one. Nor should it be.

BB: The Visual Artists Rights Act:[16] Does it make any difference? Does it do any good?

JK: Well it is a good law. But as for making a difference, not a huge one. I am glad that it's there. It's a matter of respect. It so happens, that it comes into play largely in the most problematic areas: with regard to site-specific sculpture. And it so happens, that site-specific sculpture was intentionally left out of that new law exactly because it was too difficult or

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[15] American Society of Media Photographer. *Available at*: http://asmp.org.

[16] Visual Artist Rights Act, 17 U.S.C. §106A.

problematic to resolve. One particular situation was added, work incorporated into a building, but that is it. So the law does not reach or resolve the important matter of site-specific artworks.

BB: What's your view of the resale royalty right?

JK: Well fortunately it doesn't exist right now at least since a California court declared it unconstitutional. It's on appeal so we'll see. I've become opposed to it just because of the negative impact on the relationship between artists and collectors, and the fact that I do not believe it really has the justification that people posit. I think there is a fundamental difference between the way an artwork is sold and the way books or music are sold. With a single work of art, the purchaser pays a lot for it. She takes a risk. If it goes down, she loses her money. The artist doesn't compensate the collector for that. If the artist becomes more successful, the artist generally makes more money because of that success. To enforce this really aggressive and complicated law into the marketplace doesn't make sense. And it is not needed. It's not an incentive to create. So it's just another right. It is another manifestation of the property rights mantra that drives the advocates who are on the other side of fair use. Copyright not a natural right. More and more cases nowadays are talking about the purpose of copyright, "to promote the progress of science and useful arts," and this is most welcome. Copyright rights exist primarily to benefit the public, not to prevent new work.

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