

# Essay, Digital Bowdlerizing: Removing the Naughty Bytes

by

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**bowd·ler·ize** (bōd' lə-rīz', boud'-) *tr.v.* **bowd·ler·ized**, **bowdler·iz·ing**, **bowd·ler·iz·es** 1. To expurgate (a book, for example) prudishly 2. To modify, as by shortening or simplifying or by skewing the content in a certain manner.<sup>2</sup>

## I. INTRODUCTION

“During the Victorian era, the prevailing delicacy of the age inspired Dr. Thomas Bowdler and his sister to edit Shakespeare’s plays to make them suitable for ‘family reading.’ All off-color jokes and sexual matter were removed. The word *bowdlerize* entered the language as a synonym for militant prudery.”<sup>3</sup> Luckily for Dr. Bowdler and his sister, the works of Shakespeare were clearly in the public domain. The modern Dr. Bowdlers and their accomplices do not share Dr. Bowdler’s luck, however. When they abridge modern digital works to remove content that is offensive to the conscience of their constituencies, their reward for this “public service” is allegations of, and possible liability for, copyright infringement.<sup>4</sup> Other modern Bowdlers modify software by deleting portions of code to add new capabilities. These deletions are often only shocking to the conscience or the pocketbook of the copyright owner. The legal rights being asserted by copyright owners represent a common threat to the use of copyrighted works in the private sphere. Yet, these deletions convey significant advantages to the user or consumer of bowdlerized works. Digital bowdlerization makes available works that are inherent in cultural literacy, to all age groups and delicacy of conscience.

Unlike Dr. Bowdler, who republished the works of Shakespeare with the naughty bits removed, the modern digital Bowdlerizer deletes offensive

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<sup>2</sup> <http://dictionary.reference.com/search?r=10&q=bowdlerize>

<sup>3</sup> <http://www.lionswork.com/bowdlerizingcslewis/>

<sup>4</sup> See, e.g., *Huntsman v. Soderbergh*, D. Col. CA No. 02-M-1662 (MJW), available at [http://www.eff.org/Cases/Huntsman\\_v\\_Soderbergh/](http://www.eff.org/Cases/Huntsman_v_Soderbergh/)

content from digital works in a variety of ways. This Essay will analyze the technologies used by the modern Bowdlerizer to determine when, if, and which technologies make copies in violation of the copyright owner's § 106(1) right to control reproduction or make derivative copies of a preexisting work that may infringe the copyright owner's 17 U.S.C. § 106(2) right to authorize the creation of derivative works. These technologies not only support militant prudery,<sup>5</sup> but they also may add new functionality and capabilities that expand consumer choice. The answer to many of these technological, social, and legal problems is a careful consideration of the scope of the derivative work right in a digital economy rather than the traditional approach of waiting until infringement. This Essay proposes a test to determine whether a technology produces a derivative work. This Essay concludes that the balance of the equities and the public policies behind the copyright law protect digital bowdlerizing.

## II. THE TECHNOLOGY OF BOWDLERIZING

Many technologies modify the copyrighted content in digital works. While the actual technologies may vary, they can largely be categorized as techniques that physically change the media and techniques that intercept the signal that change the display but not the media. Each of these techniques raises serious questions of copyright infringement. Since violation of the Copyright Act may depend on the technological process that removes or alters the digital display, this section will describe some representative models.

### A. *Editing the Digital Work (Physically)*

One method of digital bowdlerizing requires the Bowdlerizer to purchase a copy of the work. The work is then physically altered so that an edited copy is produced. The work is edited so that the underlying magnetic or other media no longer physically contains scenes or content that is offensive. Usually, the Bowdlerizer purchases one copy that will be altered ("edited"). The altered copy then becomes a master copy, and it is recorded on to subsequent "original" copies purchased from authorized distributors.

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<sup>5</sup> Cleanflicks Update: The Battle Continues, DGA Magazine, March 2003, [http://www.dga.org/news/v27\\_6/news\\_digitalpiracy4.php3](http://www.dga.org/news/v27_6/news_digitalpiracy4.php3) ("Not even subtlety is a guarantee against surgical manhandling, however. A scene from Redford's *The Horse Whisperer* depicts Redford doing a tender slow dance with co-star Kristin Scott Thomas that features his hand touching her back. Thomas' character is married to another man, and the FamilyFlix cut of the film completely eliminates this dance, despite its import in illustrating her character's struggle with her marriage and her attraction to another man."). In candor, they also cut from *Good Will Hunting*, 130 F-words and 75 miscellaneous curse words. See *Film-censoring software angers entertainment industry*, USA TODAY, Feb. 3, 2003. [http://www.usatoday.com/tech/news/techpolicy/2003-02-03-film-censors\\_x.htm](http://www.usatoday.com/tech/news/techpolicy/2003-02-03-film-censors_x.htm). The movie ran 126 minutes or one offensive word approximately every 36 seconds of the movie.

Other companies, will produce a Bowdlerized copy and ship it along with the original copy to the purchaser so that two copies exist, the original authorized by the copyright owner and the Bowdlerized copy as edited.

### B. *Editing the Digital Work (Virtually)*

Other popular techniques allow modern Bowdlers to “ellipse” offensive content,<sup>6</sup> this section will describe two representative technologies. Some companies use a digital template edits. The effect of the digital template is similar to that of editing a motion picture for television or airline use. A computer program is created that causes the DVD software to skip time sequences that are matched to offensive content in the original.<sup>7</sup> Offensive audio content is muted.<sup>8</sup> This method requires that the viewer simultaneously use both the digital template and an original copy of the DVD.<sup>9</sup> This software is in the early stages of its evolution. Currently, it is more readily available to use on a personal computer with a DVD drive. Nevertheless, some companies are already selling home DVD player with the capabilities of running digital templates.<sup>10</sup> Accordingly, this technology is becoming easier to use and more widely available for individual home use.

A competing technology digitally alters films to “make them more family friendly, skipping violent or sexual content and toning down language.”<sup>11</sup> This technology permits the Bowdlerizer to “drape a modest negligee over Kate Winslet during her nude scene in *Titanic*.” Or to “reshoot” *Gone With Wind*’s famous closing line from “Frankly, my dear I don’t give a damn” to “Frankly, my dear I don’t give a darn” or even “I could careless.”

## III. COPYRIGHT OWNER’S § 106 RIGHTS

The creative and financial forces in Hollywood are not taking this threat to their cultural monopoly on entertainment lightly. These forces of artistic indignation and freedom are leading a litigation charge asserting claims

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<sup>6</sup> Mike Snider, Hollywood Riled Up over Clearplay, May 5, 2004, USA Today, available at [http://www.usatoday.com/life/movies/news/2004-05-05-clearplay-main\\_x.htm](http://www.usatoday.com/life/movies/news/2004-05-05-clearplay-main_x.htm).

<sup>7</sup> Id.

<sup>8</sup> Id.

<sup>9</sup> Id.

<sup>10</sup> Id. “A simple on-screen menu lets you activate filters for 3 main categories. Within those categories are 14 sub-categories. For each movie, choose the settings that are right for your family. You can activate individual ones or all 14 at once. Violence, Moderate violence, Graphic violence, Disturbing images, Explicit Scenes & Nudity, Sensual content, Crude sexual content, Nudity, Explicit sexual situations, Language: Vain reference to deity, Crude language & humor, Ethnic and social slurs, Cursing, Strong profanity, Graphic vulgarity, Other: Explicit drug use.” <http://www.buy.com/retail/product.asp?sku=90134039&dcaid=1688>

<sup>11</sup> Film-censoring software angers entertainment industry, USA Today, Feb. 3, 2003. [http://www.usatoday.com/tech/news/techpolicy/2003-02\\_03\\_film-censors\\_x.htm](http://www.usatoday.com/tech/news/techpolicy/2003-02_03_film-censors_x.htm)

infringement under the color of copyright law. In order to sue for copyright infringement, a copyright owner must show that one of the owner's § 106 rights were violated.<sup>12</sup> The Copyright Act distinguishes between two types of ownership interests: ownership in the copyright and ownership of the tangible work that embodies the copyrighted work.<sup>13</sup> Under the Copyright Act, an owner of a copyrighted work has certain exclusive rights to that work.<sup>14</sup> For our purposes, the two most significant rights are the right §106(1) to reproduce the work<sup>15</sup> and §106(2) to prepare derivative works.<sup>16</sup> In order to state a claim for copyright infringement, the copyright owner must demonstrate that she has a validly copyrighted work and that the alleged infringer copied protected elements from the work in breach of one or more of the copyright owners §106 rights.<sup>17</sup> Bowdlerizations potentially may contravene one, several, or even all of the copyright owner's § 106 rights.<sup>18</sup> Furthermore, the creation of an bowdlerization potentially infringes

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<sup>12</sup> M. David Dobbins, Note *Computer Bulletin Board Operator Liability For Users' Infringing Acts*, 94 MICH. L. REV. 217, 220-21 (1995); 2 MELVILLE B. NIMMER AND DAVID NIMMER, NIMMER ON COPYRIGHT § 8.

<sup>13</sup> 17 U.S.C. § 202; *Effects Associates, Inc. v. Cohen*, 908 F.2d 555, 558 n.6 (9<sup>th</sup> Cir. 1990); Dennis S. Karjala, *Federal Preemption of Shrinkwrap and On-Line Licenses*, 22 U. DAYTON L. REV. 511, 538 n. 94 (1997).

<sup>14</sup> 17 U.S.C. § 106; John Kheit, *Public Performance Copyrights: A Guide to Public Place Analysis*, 26 RUTGERS COMPUTER & TECH. L.J. 1, 10-11 (1999).

<sup>15</sup> 17 U.S.C. §106(1) ("to reproduce the copyrighted work in copies or phonorecords;").

<sup>16</sup> 17 U.S.C. § 106(2) (2) ("to prepare derivative works based upon the copyrighted work;"). The copyright owners public performance (§106(3)) and display rights (§106(4)) are not within the scope of this paper. Since the copyright owner's rights are limited to those provided for in § 106, *Fortnightly Corp. v. United Artists TV, Inc.*, 392 U.S. 390, 393-95 (1968), and the right is limited to "public performances." See. 17 U.S.C. § 106(3) & 17 U.S.C. § 106(4). "To perform or display a work "publicly" means . . . to perform or display it at a place open to the public or at any place where a substantial number of persons outside of a normal circle of a family and its social acquaintances is gathered." 17 U.S.C. § 107. Clearly to the degree that these bowdlerizations are used within the privacy of one's home or similar place limited to the normal circle of family and friends, there has not been a public performance. See *Twentieth Cent. Music Corp. v. Aiklen*, 422 U.S. 151, 155 (1975); *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417, 468-69 (1984)(Blackmun, J. dissenting); Kheit, *supra* note 14, at \_\_\_\_\_.; Dan Thu Thi Phan, Note *Will Fair Use Function On The Internet*, 98 COLUM. L. REV. 169, 178 n. 61 (1998). Further, under the first sale doctrine, once the copyright owner has sold a copy, subsequent purchasers are free to sell, rent, or lease digital works. See 17 U.S.C. § 109. This does not apply to computer programs. See 17 U.S.C. § 109(c). Other rights include 17 U.S.C. §106(3) ("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;"). 17 U.S.C. § 106(4) ("in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works, to perform the copyrighted work publicly;"). 17 U.S.C. § 106(5) ("in the case of literary, musical, dramatic, and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work, to display the copyrighted work publicly;");

<sup>17</sup> *Feist Publications, Inc. v. Rural Telephone Service Co., Inc.*, 499 U.S. 340, 361 (1991); *Harper & Row, Publishers, Inc. v. Nation Enterprises*, 471 U.S. 539, 548 (1985). "Copying is a 'shorthand reference to the act of infringing any of the copyright owner's five exclusive rights set fort at 17 U.S.C. § 106.'" *Dun & Bradstreet Software Serv., Inc. v. Grace Consulting, Inc.*, 307 F.3d 197, 206 (3<sup>d</sup> Cir. 2002) (quoting *Ford Motor Co. v. Summit Motor Prod., Inc.*, 930 F.2d 277, 291 (3d Cir. 1991)).

<sup>18</sup> There does not appear to be a neutral term to describe these new types of works that does not appear to at least prejudice the ultimate outcome of the analysis. The Essay uses the term bowdlerization without prejudicing the ultimate conclusion as to whether these new independent

the copyright owner's § 106 exclusive rights in one or more independently copyrighted works, the source code, object code, or audio-visual expression of the code.<sup>19</sup> Which rights, if any that have been violated, is a highly fact and technology specific determination that requires a court to carefully examine the interaction of the original digital work, the alleged infringing bowdlerization, the firmware,<sup>20</sup> and the subsequent creation. Infringement of these exclusive rights may subject the infringer to liability unless the infringement is otherwise excused under the Copyright Act.<sup>21</sup>

#### A. Section 106(1) Reproduction Rights

The creation of a digital bowdlerization clearly implicates the copyright owner's right to reproduce the work.<sup>22</sup> In *Sega Enterprises Ltd. v. Accolade, Inc.*,<sup>23</sup> the Court found that computer files created by a disassembly program, printouts of the disassembled code, modifications generated during reverse engineering, and other intermediate copying violated the copyright owner's § 106(1) right to authorize reproductions.<sup>24</sup> Thus, the creative process leading to the design of the bowdlerization may result in intermediate copies of the work that violate the copyright owner's §106(1) right of reproduction unless otherwise permissible under the Copyright Act.<sup>25</sup>

The iterative test is used to determine substantial similarity in cases where there is an allegation of literal copying.

The iterative approach requires proof (1) that the defendant 'used' the copyrighted work in preparing the alleged copy, which may be established by proof of access and similarity sufficient to reasonably infer use of the copyrighted work; and (2) that the defendant's work is an iterative reproduction,

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supplementary works "bowdlerizations" are also derivative works.

<sup>19</sup> NIMMER ON INFORMATION LAW ¶ 11:130.

<sup>20</sup> Firmware is "[c]omputer programming instructions that are stored in a read-only memory unit rather than being implemented through software."

<sup>21</sup> 17 U.S.C. §§ 501, 504 (19XX).

<sup>22</sup> Lydia Pallas Loren, *The Changing Nature of Derivative Works in the Face of New Technologies*, 4 J. OF SMALL & EMERG. BUS. L. 57, 71-74 (2000).

<sup>23</sup> 977 F.2d 1510 (9<sup>th</sup> Cir. 1992).

<sup>24</sup> 977 F.2d at 1518; Arthur R. Miller, *Copyright Protection for Computer Programs, Databases, and Computer-Generated Works: Is Anything New Since CONTU?*, 106 HARV. L. REV. 977, 1014-1026 (1993).

<sup>25</sup> See generally *Sony Computer Entertainment, Inc. v. Connectix Corp.*, 203 F.3d 596, 599-602 (9<sup>th</sup> Cir. 2000) (describing in detail the various techniques that are used in reverse engineering). The copying does not have to be substantial in a quantitative sense. See *Dun & Bradstreet Software Services, Inc.*, 307 F.3d at 208 (suggesting that copying twenty-seven lines out of 525,000 lines of code may be sufficient).

that is, one produced by iterative or exact duplication of substantial portions of the copyrighted work.<sup>26</sup>

The first prong of the iterative test is worthless in the context of mass-market software that is readily available in the marketplace. So, access may be presumed. The second prong “divides programs into protected literal code, protected literal translations of code, and the unprotected remainder of the program.”<sup>27</sup> This test may be significant to determine the status of intermediate works that are prepared as part of the process that removes offensive content. For example, most DVD or VHS copies of movies are distributed and sold for private home viewing. This would not appear to include the right to commercial viewing for the purposes of creating a digital template. If temporary copies are loaded into RAM so that they may be digitally edited or even to facilitate timing the motion picture so that associated software templates may more effectively bowdlerize the film, these intermediate working copies may violate the copyright owner’s § 106(1) rights unless otherwise excused as a fair use.

This test is extremely useful in determining whether the process by which the digital bowdlerization was created in itself violated the copyright owners § 106(1) rights. Other than literal copying of protected code or merely translating software between programming languages, this test is unhelpful to determine if an bowdlerization is an infringing work. The iterative test may not be as useful in determining whether the product itself is an unlawful reproduction. This Essay focuses on bowdlerizations that add-value (originality) to the underlying work. This originality may be expressed in what and how the bowdlerizer edits the original work to produce the new digital bowdlerized work. These bowdlerizations are unlikely to be merely literal copying but rather putative derivative works that should be analyzed under § 106(2) of the Copyright Act.<sup>28</sup>

### *B. Section 106(2) Derivative Work Rights*

Perhaps, the most significant question is whether these technologies of Bowdlerizing create unauthorized derivative works under the Copyright Act or do they create integrated works that are not infringing. Section 106(2) grants the copyright owner the exclusive right to “to prepare derivative

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<sup>26</sup> E.F. Johnson Co. v. Uniden Corp. of America, 623 F. Supp. 1485,1493 (D. Minn. 1985) (citing Note, *Copyright Infringement of Computer Programs A Modification of the Substantial Similarity Test*, 64 MINN. L. REV. 1264, 1294-1300 (1984)).

<sup>27</sup> John W.L. Ogilvie, Note, *Defining Computer Program Parts Under Learned Hand's Abstractions Test In Software Copyright Infringement Cases*, 91 MICH. L. REV. 526, 550 (1992).

<sup>28</sup> This Essay only discusses the fair use provisions of the Copyright Act tangentially. If finding that the resulting derivative work is transformative, then the courts are likely to excuse the intermediate copying. If the digital work is a computer program, the modifications are essential to its use, and the modifier is also an owner of a copy of the program, then the intermediate copy is likely to be excused in 17 U.S.C. § 117. In either cases, further discussion of fair use is outside the scope of this Essay.

works based upon the copyrighted work[.]”<sup>29</sup> “A derivative work consists of a contribution of original material to a pre-existing work so as to recast, transform or adapt the pre-existing work.”<sup>30</sup> “Simply transferring a work from one media [sic] to another, e.g., digitizing a work or copying a bound text into a photocopy is not the creation of a derivative work . . . . Additional original, copyrightable material must be added to the original work in order to create a derivative work, i.e., a second work is derived from the first.”<sup>31</sup> Unlike derivative works, “integrated works do not copy any of the digital bits of the copyrighted work or any other copyrightable elements of the digital material that may be necessary for the integrated work to serve its intended purposes.”<sup>32</sup> If the court finds that the bowdlerization is an integrated work or is otherwise not a derivative work, then the bowdlerization does not infringe the copyright owner’s right to authorize derivative works and no further analysis will be needed.<sup>33</sup>

This Essay recommends that a court use the following analysis to determine if the bowdlerization is also a derivative work. The test is designed to protect the copyright owner’s economic incentives and to assure a robust zone of public use rights. Some of these elements are similar to the factors a court will consider as part of a § 107 fair use defense. A careful weighing of the statutory definition, public policy, and case law interpreting the definition of a derivative work may terminate the litigation prior to the Court’s engaging in a “fair use” analysis. For public policy reasons, the copyright owner must carry her burden of proof to demonstrate that she has a protectable property interest in the accused derivative work before the court determines whether creating the accused infringing work is otherwise excused under copyright law. Absent such an a priori determination, a court may erroneously make a leap from copying or use (“sweat of the brow”) to a false determination of infringement.<sup>34</sup>

“The statutory language is hopelessly overbroad, however, for ‘[e]very book in literature, science, and art, borrows and must necessarily borrow, and use much which was well knew and used before.’”<sup>35</sup> There is no bright

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<sup>29</sup> 17 U.S.C. § 106(2). A “derivative work” is a work based upon one or more preexisting works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which a work may be recast, transformed, or adapted. A work consisting of editorial revisions, annotations, elaborations, or other modifications which, as a whole, represent an original work of authorship, is a “derivative work”. 17 U.S.C. § 101.

<sup>30</sup> 1 NIMMER ON COPYRIGHT §3:03.

<sup>31</sup> JOHN KENNEDY, ET AL., 1 INTERNET LAW AND PRACTICE § 12:11 [hereinafter KENNEDY ON INTERNET LAW].

<sup>32</sup> Loren, *supra* note 22, at 66.

<sup>33</sup> Loren, *supra* note 22, at 85.

<sup>34</sup> For example, the alleged infringing work may have copied functional elements or other unprotectable expressions from the pre-existing work.

<sup>35</sup> *Micro Star v. Formgen, Inc.*, 154 F.3d 1107, 1110 (9<sup>th</sup> Cir. 1998) (quoting *Emerson v. Davies*, 8 F. Cas. 615, 619 (C.C.D. Mass. 1845) (No. 4436), *quoted in* 1 NIMMER ON COPYRIGHT, § 3.01, at 3-2 (1997)); Joseph P. Liu, *Copyright and Time: A Proposal*, 101 Mich. L. Rev. 409, 430 (2002) (“It is commonplace that new works draw from and build upon old ones. No work is purely and complete

line rule to determine when an bowdlerization or modification of a digital product rises to the level of creating a derivative work. For example, as integrated works, software add-ons such as spell checkers, dictionaries, grammar checking programs, do not become derivative works merely because they are designed to work as a module of a copyrighted work unless the add-on itself incorporates protected copyrighted works.<sup>36</sup> This Essay also contends that software programs that delete all or part of a signal or substitute a signal are not derivative works. Unless it incorporates a substantial portion of the pre-existing work merely because the pre-existing work is routed through a system that alters it is not sufficient. Obviously, “[a]ll works are derived to a certain degree from pre-existing works.”<sup>37</sup>

The customary test for a derivative work is not well thought-out to achieve an optimal result when applied in the digital environment. Under the economic incentive paradigm used to justify copyright protection, there are two legitimate reasons to grant copyright owners control over derivative works. First by enlarging the copyright grant, the copyright owner has greater incentive to produce new works.<sup>38</sup> Second, derivative works potentially impair the market for the pre-existing work by acting as a market substitute.<sup>39</sup> Any curb on the definition of a derivative work should protect these foundation interests without trespassing on the public’s right of access to and use of the copyright work.

#### IV. PROPOSED TEST OF AN INFRINGING DIGITALLY BOWDLERIZED WORK

In the context digital works, this Essay purposes the following a four-factor test for determining whether the accused work is an infringing derivative work.<sup>40</sup> In order to determine that an accused work is derivative work under § 106(2); a court should consider whether the accused work: (1) incorporates copyrightable content from the primary or underlying work; (2) is "embodied in a concrete form;" (3) is "substantially similar" to the

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new. All works draw upon prior works, to at least some extent.”).

<sup>36</sup> NIMMER ON INFORMATION LAW, ¶ 4:56; *Lewis Galoob Toys, Inc. v. Nintendo of Am., Inc.*, 964 F.2d 965, \_\_\_ (9<sup>th</sup> Cir. 1992).

<sup>37</sup> *Apple Computer, Inc. v. Microsoft Corp.*, 759 F. Supp. 1444, 1454 (N.D. Cal. 1991).

<sup>38</sup> Loren, *supra* note 22, at 76.

<sup>39</sup> Loren, *supra* note 22, at 76.

<sup>40</sup> The case law is not clear on whether this is an element, factor, or some sui generis hybrid test. Since at least some of these criterion must be met, for example the alleged infringing work must be embodied in a concrete form, and the alleged infringing work must be either substantially similar or incorporate protectable copyrighted content, this Essay presumes that this is an elements test. *See Micro Star*, 154 F.3d at 1110 (listing two of out of the four suggested “criteria a work must satisfy in order to qualify as a derivative work. One of these is that a derivative work must exist in a “concrete or permanent form,” and must substantially incorporate protected material from the preexisting work.”)(internal citations omitted)(emphasis supplied). *But see*, Mark A. Lemley, *Dealing with Overlapping Copyrights on the Internet*, 22 U. DAYTON L. REV. 547, 562 (1997) (“the definition of derivative works does not require that they be fixed. Thus, those who alter a copyrighted work in RAM memory may face liability under § 106(2) . . .”). This Essay proposes a factor test and to leave the weighing of the factors to the sound discretion of the trial court.

primary work; and (4) supplants or satisfies market demand for the protected expression fixed in the primary work.<sup>41</sup> This test is based on the factors, the court first articulated in *Lewis Galoob Toys, Inc.* but redefines some of the elements so that the test is more nuanced and balanced. Only after finding that the copyright owner has a protectable copyright interest in the accused work that the burden shifts to the defendant and the § 107 fair use factors may be examined in light of the evidence adduced by the defendant as part of the defendant's affirmative defense..

#### A. *Derivative Works Must Incorporate Copyrightable Content*

First, the court must distinguish between unauthorized reproductions under § 106(1) and the unauthorized creation of a derivative work under § 106(2). For a derivative work to be protected there must be a distinguishable difference from the pre-existing work that is more than merely trivial.<sup>42</sup> Some courts have omitted or overlooked the statutory requirement that the work have some modicum of originality before it may be found to be a derivative work.<sup>43</sup> These courts do this by unduly construing the statutory language of "recast, transformed or adapted" while disregarding the constraint that the "modifications which, as a whole, represent an original work of authorship."<sup>44</sup> Worse, these courts have fashioned two definitions of derivative works, one for creating a new derivative work for the purposes of copyright registration and another for the infringement of another's copyright.<sup>45</sup> For example, in the Ninth Circuit, a party seeking to register a copyright must show originality and fixation in a tangible medium of expression; "yet, a party bringing a copyright action for an alleged infringement of its exclusive rights to create derivative works need not."<sup>46</sup>

This approach of the United States Court of Appeals for the Ninth Circuit poses at least two problems. Such a bifurcated definition produces an inordinate risk that "courts will naively apply this broad definition to find activities infringing that are more properly viewed as altogether beyond the scope of copyright."<sup>47</sup> As one court found, the cases that read the

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<sup>41</sup> Edward G. Black and Michael H. Page, *Add-On Infringements: When Computer Add-Ons And Peripherals Should (And Should Not) Be Considered Infringing Derivative Works Under Lewis Galoob Toys, Inc. V. Nintendo Of America, Inc., And Other Recent Decisions*, 15 HASTINGS COMM/ENT L.J. 615, 621 (1993). Cf. *Lewis Galoob Toys, Inc.*, 964 F.2d at 965-69; *Micro Star*, 154 F.3d at 1110.

<sup>42</sup>1 NIMMER ON COPYRIGHT § 3:03; *Asia Entertainment v. Nguyen*, 1996 U.S. Dist. LEXIS 17792, \*5 (C.D. Cal. 1996).

<sup>43</sup> See, e.g., *Mirage Editions, Inc. v. Albuquerque A.R.T. Co.*, 856 F.2d 1341, 1344 (9<sup>th</sup> Cir. 1988).

<sup>44</sup> *Lee v. Deck the Walls*, 925 F. Supp. 576, 580-81 (N. Ill. 1986).

<sup>45</sup> *Lewis Galoob Toys, Inc. v. Nintendo of Am., Inc.*, 964 F.2d 965, 967-68 (9<sup>th</sup> Cir. 1992).

<sup>46</sup> 925 F. Supp. at 581 (citing *Lewis Galoob Toy's, Inc.*, 964 F.2d at 967-68).

<sup>47</sup> 925 F. Supp. at 581 (quoting Black & Page, *supra* note **Error! Bookmark not defined.**, at 628-29).

originality requirement out of the definition of a derivative work, “open the door for the most trivial of modifications to generate an infringing derivative work.”<sup>48</sup> Further, such an analysis flouts the clear intent of Congress as expressed in the statutory definition of a derivative work.<sup>49</sup>

The better approach is that of the United States Court of Appeals for the Second Circuit in *Woods v. Bourne Co.*<sup>50</sup> “In order for a work to qualify as a derivative work, it must be independently copyrightable. The basis for copyright protection contained in both the constitution and the Copyright Act is originality of authorship.”<sup>51</sup>

Original, as the term is used in copyright, means only that the work was independently created by the author (as opposed to copied from other works), and that it possesses at least some minimal degree of creativity . . . . To be sure, the requisite level of creativity is low; even a slight amount will suffice. The vast majority of works make the grade quite easily, as they possess some creative spark, “no matter how crude, humble or obvious” it might be. . . .<sup>52</sup>

The “original aspects of a derivative work must be more than trivial.”<sup>53</sup> Further, “the requirement of originality [cannot] be satisfied simply by the demonstration of ‘physical skill’ or ‘special training’ . . . .”<sup>54</sup> For example, copying the works of the great masters may require physical skill and special training, but it does not entitle the copier to a copyright in the copy of the original.<sup>55</sup> The standard applied in the case of a derivative work must be the higher standard of true artistic skill.<sup>56</sup>

If the accused infringing derivative work meets the originality standard, then the court must evaluate whether the accused infringing work incorporates copyrightable content from the preexisting work.<sup>57</sup> This is the

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<sup>48</sup> 971 F. Supp. at 69.

<sup>49</sup> See 17 U.S.C. § 101. Perhaps, “flout” is too strong a term. There is language in the Notes of the Committee of the Judiciary that “The exclusive right to prepare derivative works . . . overlaps the exclusive right of reproduction to some extent. It is broader than that right . . . in the sense that reproduction requires fixation in copies . . . whereas . . . a derivative work, such as ballet, pantomime . . . may be an infringement even though nothing is ever fixed . . . .” H.R. Rep. No. 146, 1976 U.S.C.C.A.N. at 5675. Nevertheless, under the 1976 Copyright Act, other provisions of § 106 prohibit the activities described in the legislative history and it does a disservice to the Copyright Act to needlessly expand the scope of § 106(2) to prevent copying that is prohibited elsewhere in § 106.

<sup>50</sup> 60 F.3d 978, 989 (2<sup>d</sup> Cir. 1995).

<sup>51</sup> 60 F.3d. at 989 (internal citations omitted).

<sup>52</sup> *Feist Publications v. Rural Tel. Service*, 499 U.S. 340, 354 (1991).

<sup>53</sup> 60 F.3d. at 989 (internal citations omitted).

<sup>54</sup> *L. Batlin & Son, Inc. v. Snyder*, 536 F.2d 486, 490-91 (2d Cir.) (in banc), cert. denied, 429 U.S. 857 (1976).

<sup>55</sup> *See Pekar v. Masters Collection*, 96 F. Supp. 2d 216, 221 (E.D.N.Y. 2000).

<sup>56</sup> *L. Batlin & Son*, 536 F.2d at 491; *Durham Indus., Inc. v. Tomy Corp.*, 630 F.2d 905, 910 (2d Cir. 1980)

<sup>57</sup> *Micro Star v. Formgen, Inc.*, 154 F.3d 1107, 1110 (9<sup>th</sup> Cir. 1998); *Lewis Galoob Toys, Inc. v. Nintendo of Am., Inc.*, 964 F.2d 965, 972 [check this pinpoint] (9<sup>th</sup> Cir. 1992); *Litchfield v.*

key element that will separate an integrated work from a derivative work. This requires an assessment of the “qualitative value of the copied material, both to the originator and to the plagiarist.”<sup>58</sup> There does not appear to be any concrete method of measuring this factor. Courts have considered the quantity of the copying and found that “the fact that a substantial portion of the infringing work was copied verbatim is evidence of the qualitative value of the copied material, both to the originator and to the plagiarist who seeks to profit from marketing someone else's copyrighted expression.”<sup>59</sup> However, the quantity of the copying is less significant than the qualitative nature of the copying.<sup>60</sup> Almost certainly, the best way conceptualize this factor is as some ratio between quantity and quality delineating the frontier between permissible and impermissible uses. The exact ratio in each case is context and market specific to the facts of the dispute.

To determine the qualitative aspects of the work, the court seeks to find the heart of the work. The heart of the work is the original expressive elements that give the work its utmost value. Here, the original expressive elements of the software give the software its market value. This will require expert testimony to distinguish between prosaic, trivial expressions or functional elements and original expression, and then to take the next step to determine the qualitative significance of the copied expression. For example, what at first blush may appear to be creative original expression may represent merely a translation between programming languages or merely a “mechanical” change in variables. Courts should avoid the tautological definition of qualitative value. Some courts have fallen into the logical fallacy that if the original expression was used then it must also be qualitatively significant without making an independent valuation. Rather, courts must determine whether the amount copied is “reasonable in relation to the purpose of the copying.”<sup>61</sup>

### *B. Derivative Works Must be in a Concrete Form*

A derivative work must be embodied in a concrete or permanent form,<sup>62</sup> but the derivative work does not have to be “fixed” as defined under

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Spielberg, 736 F.2d 1352, 1357 (9<sup>th</sup> Cir. 1984); Black & Page, *supra* note **Error! Bookmark not defined.**, at 622; Notes of the Committee on the Judiciary, House Report No. 94-1476.

<sup>58</sup> *Dun & Bradstreet Software Services, Inc. v. Grace Consulting, Inc.*, 307 F.3d 197, 208 (3rd Cir. 2002) (quoting *Harper & Row, Publishers, Inc. v. Nation Enterprises*, 471 U.S. 539, 565 (1985)).

<sup>59</sup> *Harper & Row*, 471 U.S. at 565.

<sup>60</sup> *Dun & Bradstreet*, 307 F.3d at 208.

<sup>61</sup> *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 587 (1994). Properly analyzed this factor may reveal whether “a substantial portion of the infringing work was copied verbatim” from the copyrighted work is a relevant question for it may reveal a dearth of transformative character or purpose under the first factor, or a greater likelihood of market harm under the fourth; a work composed primarily of an original, particularly its heart, with little added or changed, is more likely to be a merely superseding use, fulfilling demand for the original.” 510 U.S. at 588 (internal citations omitted).

<sup>62</sup> *Lewis Galoob Toys, Inc.*, 964 F.2d at 967.

the Copyright Act.<sup>63</sup> Section 102(2) grants the copyright owner the right “to prepare” derivative works.<sup>64</sup> If Congress intended the derivative work right to require fixation, Congress would have provided the copyright owner with the right “to create” derivative works.<sup>65</sup> But, all of the examples of derivative works in the Copyright Act presuppose a physical or concrete form.<sup>66</sup> “The legislative history similarly indicates that ‘the infringing work must incorporate a portion of the copyrighted work in some form.’”<sup>67</sup> “Incorporate” suggests the embodiment into some tangible form. Consequently, an independent fixation requirement has been read into the statutory definition of a derivative work.<sup>68</sup>

This element of the derivative work test may be problematic depending on the technology. If the fixation is embodied in the bowdlerization then this element is potentially satisfied. However, if the bowdlerization fixes the derivative work in the memory associated with some other device or memory location then potentially the device will not infringe.

Many add-on programs run in a memory resident mode wherein the add-on and the primary program are both stored at different memory locations in the same computer and a single integrated program is never created or stored in memory. . . . [Alternatively] computer programs may operate by creating integrated works that are stored only at temporary memory locations and are erased every time the program is completed.<sup>69</sup>

The results of a legal test to determine a derivative work should be technology neutral when appropriate and not depend on the sophistication of software engineers or serendipitous choice of technology in products. Memory resident programs may be the copyright equivalent of preprogramming a compact disc player to play a compact disc in some prearranged or random order that departs from the order selected by the author. Programs stored in temporary memory locations as the program is being executed may be the equivalent of the “evanescent screen displays”

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<sup>63</sup> *Micro Star*, 154 F.3d at 1111.

<sup>64</sup> 17 U.S.C. § 102(2). Evan Finkel, *Update To: Copyright Protection For Computer Software In The Nineties*, 8 SANTA CLARA COMPUTER & HIGH TECH. L.J. 99, 102 (1992); Carol S. Curme, Note, *Derivative Works Of Video Game Displays: Lewis Galoob Toys, Inc. V. Nintendo Of Am., Inc.*, 964 F.2D 965 (9<sup>th</sup> Cir. 1992), 61 U. CIN. L. REV. 999, 1022 (1993). I. Trotter Hardy, Jr., *Six Copyright Theories For The Protection Of Computer Object Programs*, 26 ARIZ. L. REV. 845, 855 (1984) (“Nothing in the definition requires that a derivative work be fixed in a tangible medium”).

<sup>65</sup> Finkel, *supra* note 64 at 102.

<sup>66</sup> *Micro Star*, 154 F.3d at 1111; *Lewis Galoob Toys, Inc.*, 864 F.2d at 967-68; Black & Page, *supra* note **Error! Bookmark not defined.**, at 625.

<sup>67</sup> *Lewis Galoob Toys, Inc.*, 964 F.2d at 967 (quoting 1976 U.S. Code & Admin. News 5659, 5675).

<sup>68</sup> *Micro Star*, 154 F.3d at 1111; *Precious Moments, Inc. v. La Infantil, Inc.*, 971 F. Supp 66, 68 (D. PR 1997).

<sup>69</sup> Black & Page, *supra* note **Error! Bookmark not defined.**, at 614-15.

that Courts have found to be too ephemeral to constitute derivative works.<sup>70</sup> This creates a perverse situation where the process by which the accused derivative work is created is more significant than either the work or the effect of the work on the copyright system of incentives to create new works. Perhaps the simplest solution is to reject the metaphysical examination of fixation in favor of a pragmatic test recognizing that if a copy exists long enough for the computer to use that copy *or* if that copy can be readily recreated whenever necessary or desired, then that copy is suitably fixed for the rationale of the Copyright Act.

### C. Derivative Works Must be Substantially Similar

The alleged infringing derivative work must be substantially similar to the preexisting work.<sup>71</sup> “Similarity of expression focuses on the response of the ordinary reasonable person, and considers the total concept and feel of the works.”<sup>72</sup> In essence, this test studies the elasticity of demand of the alleged infringing derivative work as a substitute for the pre-existing work.<sup>73</sup>

The analysis applied in the Ninth Circuit to determine substantial similarity can be roughly summarized as a four-step process: (1) the works at issue are analytically dissected with the aid of expert testimony into component elements; (2) the elements are individually analyzed for protectability, and unprotected ideas, processes, functions, scenes à faire, and so forth are excluded; (3) the court, again with the aid of expert testimony, determines if the works are “extrinsically” or “objectively” substantially similar; and (4) the trier of fact determines if the works are “intrinsically” or “subjectively” substantially similar.<sup>74</sup>

The fourth element of the Ninth Circuit test, the “ordinary observer” test has been criticized in the context of computer software.<sup>75</sup> In *Whelan*

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<sup>70</sup> Black & Page, *supra* note **Error! Bookmark not defined.**, at 625-26.

<sup>71</sup> *Micro Star v. Formgen, Inc.*, 154 F.3d 1107, 1111 (9<sup>th</sup> Cir. 1998).

<sup>72</sup> *Micro Star*, 154 F.3d at 1111. See Amy B. Cohen, *Masking Copyright Decisionmaking: The Meaninglessness of Substantial Similarity*, 20 U.C. DAVIS L. REV. 719, 766 (1987) (Substantial similarity test rejects expert testimony and analysis, blurs the lines between protected and unprotected expression, and does not define when similarity is substantial);

<sup>73</sup> See Wendy J. Gordon, *Fair Use as Market Failure: A Structural And Economic Analysis Of The Betamax Case And Its Predecessors*, 82 COLUM. L. REV. 1600, 1643-44 & n. 237 (1982); Glynn S. Lunney, Jr., *Reexamining Copyright's Incentives-Access Paradigm*, 49 VAND. L. REV. 483, 517-19 & N. 141 (1996); Cf. Christian H. Nandan, *A Proposal to Recognize Component Works: How A Teddy Bears on the Competing Ends of Copyright Law*, 78 CAL. L. REV. 1633, 1642-1644 (1990).

<sup>74</sup> Black & Page, *supra* note **Error! Bookmark not defined.**, at 630 n. 45 (citing *Brown Bag Software v. Symantec Corp.*, 960 F.2d 1465, 1474-76 (9<sup>th</sup> Cir.), cert. denied, 113 S. Ct. 198 (1992)); *Shaw v. Lindheim*, 919 F.2d 1353, 1356-57 (9<sup>th</sup> Cir.1990).

<sup>75</sup> *Whelan Associates, Inc. v. Jaslow Dental Laboratory, Inc.*, 797 F.2d 1222, 1232-33 (3d 1986);

*Associates v. Jaslow Dental Laboratory*, the Third Circuit concluded that the ordinary observer section of the substantial similarity test was not suitable for the multifaceted computer program copyright case before it. Writing for a unanimous panel, Judge Becker reasoned that the complexity of computer programs, combined with the public's unfamiliarity with such programs, rendered the ordinary observer test absurd.<sup>76</sup> The Seventh Circuit held that

only a reckless indifference to common sense would lead a court to embrace a doctrine that requires a copyright case to turn on the opinion of someone who is ignorant of the relevant differences and similarities between two works. Instead, the judgment should be informed by people who are familiar with the media at issue.<sup>77</sup>

Inherent in the nature of software interoperability and other digital works, many bowdlerizations or add-ons will have a significant similarity of expression. This similarity of expression will be imposed not by expressive or creative choice or lack thereof, but rather through the requirements of the operating code of the preexisting work or the functional requirements of the market. For example, binary code must be 0's, and 1's each programming language has its own syntax, many applications must have the same data fields, and of course nesting hierarchies of menus may not be protected.<sup>78</sup> These types of similarities are irrelevant to determining similarity of expression. The substantial similarity test fails in the case of bowdlerizations that function as add-ons. There should be substantial similarity between a word-processor with a spell-check program or the Game Genie. Consequently, the preferred test is a unitary one that collapses the extrinsic and intrinsic tests and incorporates expert testimony.<sup>79</sup> Courts should adopt "a single substantial similarity inquiry according to which both lay and expert testimony would be admissible."<sup>80</sup> The focus when applying this unitary test is making "mak[ing] a qualitative, not quantitative, judgment about the character of the work as a whole and the importance of the substantially similar portions of the work."<sup>81</sup>

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E.F. Johnson Co. v. Uniden Corp. of America, 623 F. Supp. 1485, 1493 (D. Minn. 1985).

<sup>76</sup> Dawson v. Hinshaw Music Inc., 905 F.2d 731, 735 (4<sup>th</sup> Cir. 1990) (citing Whelan Assoc., Inc., 797 F.2d 1222 (3d Cir.1986), cert. denied, 479 U.S. 1031 (1987)).

<sup>77</sup> Dawson, 905 F.2d at 735.

<sup>78</sup> William F. Patry, *Copyright And Computer Programs: It's All In The Definition*, 14 CARDOZO ARTS & ENT. L.J. 1, 4 (1996).

<sup>79</sup> *Whelan Associates, Inc.*, 797 F.2d 1233 ("ordinary observer test is not useful and is potentially misleading when the subjects of the copyright are particularly complex, such as computer programs. We therefore join the growing number of courts which do not apply the ordinary observer test in copyright cases involving exceptionally difficult materials, like computer programs, but instead adopt a single substantial similarity inquiry according to which both lay and expert testimony would be admissible.")

<sup>80</sup> 797 F.2d at 1233 (citations omitted).

<sup>81</sup> 797 F.2d at 1245 (citations omitted).

*D. Derivative Works must Supplant or Satisfy Market Demands*

A requirement that a court considers is whether the derivative works supplant or satisfy market demands marks a departure from traditional derivative work analysis. This new factor is particularly significant in the context of bowdlerizations or add-ons. Consequently, this element must focus on whether the bowdlerization represents technology by improvement or by replacement. If the bowdlerization enhances but does not replace or recast the copyrighted work then the bowdlerization does not infringe the rights of the copyright owner.

This point may be illustrated by two examples. A motion picture that is an bowdlerization or derivative work of a novel may be a market substitute for the pre-existing work. Seeing the motion picture may substitute for purchasing the novel. This would result in the copyright owner losing her copyright incentive. However, a consumer would not find a word-processing program with a spell checker to be substantially similar to a stand-alone spell checker. Sales of the stand-alone spell checker creates a market for word processing programs without spell checkers but does not substitute for a word processing program. Spell checkers broaden the functionality of a word-processing program but do not substitute for owning one. In this case, the copyright owner would receive her economic incentive under the Copyright Act.

Whether there is a likelihood that the copyright owner would enter into the market for the bowdlerization or license others to satisfy the market for derivative work is one factor of the test for whether the bowdlerization is an infringing derivative work. “[T]he ‘potential market’ for the [preexisting work] is limited to markets for the existing copyrighted work, and any attempt by the copyright [owner of the preexisting work] to control the use of products that add new features or operations to the [preexisting work] runs counter to the purposes of copyright and should prevent a copyright [owner] from defeating a claim of fair use.”<sup>82</sup> Markets that may only be exploited using the new features are not preexisting markets to the copyright owner.

A court may examine whether this sort of bowdlerization is one that is usually licensed or made by the copyright owner. Even if it is a market usually exploited by the copyright owner, the longer the time between the initial marketing of the copyrighted work and the copyright owner’s exploitation of the derivative work market, the less likely that this particular copyright owner would be to exploit the market. Courts should be free not only to examine the theoretical markets but also those that this particular

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<sup>82</sup> Black & Page, *supra* note **Error! Bookmark not defined.**, at 642-43; *Campbell*, 510 U.S. at 593 “In considering the fourth factor, our concern is not whether the secondary use suppresses or even destroys the market for the original work or its potential derivatives, but whether the secondary use usurps or substitutes for the market of the original work.”); *Sega*, 977 F.2d at 1524;

copyright owner would actually exploit. In the case of an unique software product with no market track record on which to establish the value of, or even need for, subsequent bowdlerizations or derivative works, the copyright owner should be given more time to develop these new markets. In either case, the copyright owner bears the responsibility of showing that there is a reasonable probability that she will enter into the new market or that the bowdlerization competes in a market she already exploits.

This may appear to change the law that the defendant has the burden of proof to show an affirmative defense of fair use.<sup>83</sup> At first, this may seem like an anomaly but in actually, courts often place the burden of demonstrating a negative that there is no fair use defense on the plaintiff when the plaintiff seeks a preliminary injunction.<sup>84</sup> The reality is that absent a property interest, the defendant has no obligation to defend. Therefore, proving that this accused work is a derivative work is properly placed on the plaintiff. Also, the plaintiff is in the best position to adduce evidence of whether a market exists and whether it has been or will be exploited. This element does not impermissibly shift the burden of proof rather it examines the evidence properly first as to whether the is a derivative work, if there is such a work, the court may then reweigh this evidence as a factor in the fair use analysis. Each weighing serves a separate salutary purpose.

#### 1. Midway Mfg, Co., Lewis Galoob Toys, Inc., & Micro Star

Two cases capture the logical extremes of determining whether an accused infringing work is a derivative work in the software context, *Midway Mfg, Co. v. Artic Int'l, Inc.*,<sup>85</sup> and *Lewis Galoob Toys, Inc. v. Nintendo of America, Inc.*<sup>86</sup> In *Midway Mfg, Co.* the plaintiff sold arcade style video games that were played in commercial establishments. Dedicated players eventually mastered the tricks associated with the game and were then able to play for hours without feeding the arcade machine more quarters. Alternatively, they became bored with the predictable play and lost interest in the game. In either case, this resulted in a loss of revenue for the proprietors of the establishments where these arcade games were played. Defendant sold circuit boards that speeded up the rate of play. "Speeding up a video game's action makes the game more challenging and

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<sup>83</sup> See *Bateman v. Mnemonics, Inc.*, 79 F.3d 1532, 1542 n. 22 (11th Cir.1996) ("[I]t is clear the burden of proving fair use is always on the putative infringer.").

<sup>84</sup> *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1015 (9<sup>th</sup> Cir. 1991); See *Atari Games Corp. v. Nintendo*, 975 F.2d 832, 837 (Fed. Cir. 1992); *Religious Technology Center v. Netcom On-Line Communication Services, Inc.*, 923 F. Supp. 1231, 1242 n. 12 (N.D. Cal. 1995) (citing *See 2 William Schwarzer et al., California Practice Guide: Federal Civil Procedure Before Trial* ¶ 13:47 (1994) (citing *Original Appalachian Artworks v. Topps Chewing Gum*, 642 F. Supp. 1031, 1034 (N.D.Ga.1986)). *But see* William F. Patry, *Copyright Law & Practice*, 725, 725 n.27 (1994) (citing cases).

<sup>85</sup> 704 F.2d 1009 (7<sup>th</sup> Cir. ), cert. denied, 464 U.S. 823 (1983)

<sup>86</sup> 964 F.2d 965 (9<sup>th</sup> Cir. 1992), cert. denied, 507 U.S. 985 (1993).

exciting and increases the licensee's revenue per game. [P]layers are willing to pay an additional price-per-minute in exchange for the challenge and excitement of a faster game. . . ."<sup>87</sup>

One of the issues before the *Midway Mfg, Co.* Court was whether the speeded up game constituted a derivative work.<sup>88</sup> The Court rejected the analogy that "[s]peeding up the rate of play of a video game is a little like playing of a 45 or 78 revolutions per minute ("RPM's") a phonograph record recorded at 33 RPM's."<sup>89</sup> The Court concluded that a dance club playing a phonograph record, at a higher rate of speed would not be an infringement, because, "there is little if any demand for speeded-up records."<sup>90</sup> Then the Court rejected the analogy because there was a significant market demand for speeded-up video games. "As noted, it is more exciting to play and it requires some creative effort to produce. For that reason, the owner of the copyright on the game should be entitled to monopolize it on the same theory that he is entitled to monopolize the derivative works specifically listed in Section 101."<sup>91</sup> "It is not obvious from [the statutory] language whether a speeded-up video game is a derivative work. A speeded-up phonograph record is probably not."<sup>92</sup> "But the amount by which the language of [the statutory definition of a derivative work] must be stretched to accommodate speeded-up video games is, we believe, within the limits which Congress wanted [the Copyright Act] to operate."<sup>93</sup>

The other extreme is *Lewis Galoob Toys, Inc. v. Nintendo of Am., Inc.* The *Lewis Galoob Toys, Inc.* case also addressed whether a device that modified a computer game created an infringing derivative work.<sup>94</sup> The defendant manufactured a device ("Game Genie") that permitted a player to alter up to three features of a Nintendo game. For example, the Game Genie permitted the player to increase the number of lives of the player's character, increase the speed of the character, increase the strength of the character, and allow the character to float above obstacles. The Game Genie functioned by blocking the value for a single data byte sent by the game cartridge to the central processing unit in the Nintendo Entertainment System ("NES") and replacing it with a new value.<sup>95</sup> If that value controlled the character's strength, increasing the value sufficiently would result in an invincible character.<sup>96</sup> However, the Game Genie did not modify the data

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<sup>87</sup> 704 F.2d at 1013.

<sup>88</sup> 704 F.2d at 1013.

<sup>89</sup> 704 F.2d at 1013.

<sup>90</sup> 704 F.2d at 1013.

<sup>91</sup> 704 F.2d at 1014.

<sup>92</sup> 704 F.2d at 1014.

<sup>93</sup> 704 F.2d at 1014.

<sup>94</sup> 964F.2d at 967.

<sup>95</sup> The Game Genie was designed to fit between the NES control deck and the video game cartridge. In order to use the Game Genie, it must be physically attached to a video game cartridge and then inserted into the NES control deck.

<sup>96</sup> 964 F.2d at 976. The Nintendo Entertainment System (NES) was an 8-bit video game system

stored in the game cartridge.

The *Lewis Galoob Toys, Inc.* Court held that the Game Genie did not infringe Nintendo's right to make derivative works. The Court found that the Copyright Act required that the alleged infringing derivative work be fixed.<sup>97</sup> The Game Genie merely enhances audiovisual displays and no portion of the copyrighted work is ever fixed by the Game Genie. "The Game Genie cannot produce an audiovisual display; the underlying display must be produced by a [NES] and game cartridge."<sup>98</sup> The Court also considered the market. The Court did not examine Lewis Galoob Toys, Inc. use of the Game Genie. Rather, the Court examined the use of the Game Genie by the end user. In this case, the end users were consumers who in the privacy of their own homes modified the copyright Nintendo game cartridges for their own personal pleasure. There was no evidence of any actual or potential public performance of the video game. Further, Nintendo had no present intention of ever marketing a product that would compete with the Game Genie.

The United States Court of Appeals for the Ninth Circuit tried to harmonize *Midway Mfg. Co.* with *Lewis Galoob Toys, Inc.* in *Micro Star v. Formgen, Inc.*<sup>99</sup> *Micro Star* involved a dispute over user-created game levels. The plaintiff owned Duke Nukem 3D ("D/N-3D").<sup>100</sup> The game came with "twenty-nine levels of play each with different scenery, aliens, and other challenges."<sup>101</sup> The game also came with a "Build Editor" to permit players to create their own new levels of play. Formgen encouraged players to post these new levels of play on the Internet so other players would have access to them. *Micro Star*, the defendant, downloaded 300 user-created levels, copied them onto a CD-Rom, and sold them. D/N-3D consists of three components, the game engine, the source art library, and the MAP files. To generate the appropriate audiovisual level, the game engine runs the MAP file that describes the audiovisual level and instructs the game engine where to place objects from the art library in the audiovisual display. The MAP file describes the level but does not contain any copyrightable art.

Before the Court was whether audiovisual displays created when the MAP files ran in conjunction with the game engine and art library were a derivative work of the D/N-3D game.<sup>102</sup> The answer to this question depended on whether the audiovisual work produced by the MAP file was in sufficiently concrete or permanent form as to constitute a derivative

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sold between 1985-1995. See Martin Nielsen, The Nintendo Entertainment System (NES) FAQ v3.0A, Released : 8th October 1997, <http://www.classicgaming.com/museum/faqs/nesfaq.shtml> (last visited 15 May 2003).

<sup>97</sup> 964 F.2d at 969.

<sup>98</sup> 964 F.2d at 968.

<sup>99</sup> *Micro Star v. Formgen, Inc.*, 154 F.3d 1107 (9<sup>th</sup> Cir. 1998); Loren, *supra* note 22at 72 -74.

<sup>100</sup> *Micro Star*, 154 F.3d at 1109.

<sup>101</sup> *Micro Star*, 154 F.3d at 1109.

<sup>102</sup> *Micro Star*, 154 F.3d at 1110.

work.<sup>103</sup> The *Micro Star Court* analyzed the opinion in *Lewis Galoob Toy's, Inc.* The *Lewis Galoob Toy's, Inc.* Court held that “a derivative work must incorporate a protected work in some concrete or permanent form.”<sup>104</sup> The overarching work in question was the right to create sequels to the D/N-3D game. The audiovisual images created by the Game Genie device in *Lewis Galoob Toy's, Inc.* were not incorporated in any permanent form, “when the game was over, they were gone.”<sup>105</sup> The *Micro Star Court* then distinguished the MAP files from the Game Genie device by finding that the MAP file was analogous to sheet music.<sup>106</sup> Whenever a player uses a given MAP file, the game engine uses the same objects from the source art library file to create the same audiovisual image. As a result, the MAP file created a sufficient concrete or permanent form of the audiovisual display as to create a derivative work.

#### [DEVELOP]

#### *E. Derivative Works, Integrated Works, and Add-ons, Policy Considerations*

The difference between an add-on or integrated work and a derivative work is often subtle and marginal. “Because most computer products are designed to be interoperable components of larger systems, copyright doctrines that regulate the ability of third parties to develop add-ons that operate in conjunction with primary products have implications for nearly all computer products.”<sup>107</sup> “More broadly, any proprietor whose hardware or software becomes dominant, or even a relatively common, operating environment may wish to impose economic or other controls on access to that environment for additional products that interact with it.”<sup>108</sup> Courts must be careful that the scope of the Copyright Act is not used to grant quasi-patent protection to software.

Perhaps the best method of furthering the Congressional determination that is espoused in the Copyright Act is to constrain the scope of the § 102(2) derivative work right by considering the economic policies underlying the right to create derivative works.<sup>109</sup> These policies are often sound in the traditional area of copyright law but may not reflect the reality of the software market. Traditional concerns such as diluting the economic

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<sup>103</sup> *Micro Star*, 154 F.3d at 1111 (citing *Lewis Galoob Toy's, Inc. v. Nintendo of Am., Inc.*, 964 F.2d 965, 967-68 (9th Cir. 1992)).

<sup>104</sup> *Micro Star*, 154 F.3d at 1111 (citing *Lewis Galoob Toy's, Inc.*, 964 F.2d at 967 (internal quotations omitted in original)).

<sup>105</sup> *Micro Star*, 154 F.3d at 1111.

<sup>106</sup> The author thinks player piano rolls would have been a better analogy.

<sup>107</sup> Black & Page, *supra* note **Error! Bookmark not defined.**, at 618.

<sup>108</sup> Black & Page, *supra* note **Error! Bookmark not defined.**, at 619.

<sup>109</sup> Two addition justifications are often offered to support derivative works: moral rights and unjust enrichment. See Loren, *supra* 22, at 82-84. Unjust enrichment presumes since the derivative work embodies some of the work of a prior author that author should be compensated for the use of her work. Moral rights or natural rights play at best a minor role in the U.S. copyright regime based on economic incentives so they are outside the scope of this Essay.

incentive provided to copyright owners, the effect on the market for the original work, and the early dissemination of new works are function differently in the modern software market.

### 1. Economic Incentive

Copyright law in the United States is built on an axiom that its purpose is to encourage the progress of learning and not to maximize the wealth of copyright owners.<sup>110</sup> Copyright policy carefully weighs the public's interest in providing protection to the copyright owner to reward creativity to encourage subsequent investment should result in the dissemination of the work (knowledge).<sup>111</sup> By granting the copyright owner the right to authorize derivative works, Congress has greatly increased the scope of the copyright estate. This presumes that the greater the copyright estate, the greater the investment in the work and a resulting increase in creative works and their dissemination. Correspondingly, the greater the estate the fewer the works that will build on the pre-existing work during the copyright term, and the more authors are deterred from creating works that may fall within the penumbra of the rights granted in this enhanced estate.<sup>112</sup> If there is market for a bowdlerization or integrated work, and the copyright owner is not exploiting this market in a reasonable period, then clearly this economic incentive is irrelevant to the investment motivation behind granting the derivative work right.

### 2. Market Harm

A closely related issue is market harm. This justification considers whether the derivative work serves as a market substitute for the pre-existing work. Derivative works may discourage investment in the pre-existing work or even drive the pre-existing work from the market. Either eventuality would deny the creator of the original work her economic incentive under the Copyright Act. This market substitution effect presupposes that the pre-existing work and the derivative work are substantially similar and may serve as substitutes for each other.<sup>113</sup> For example, if you see the movie or the play, why buy the book? Each experience of the work is separate and stands alone. You may buy the book, but that purchase is unnecessary to enjoy the movie. But even in this old saw of an example, the experience of seeing the play in a theatre with a live performance is not clearly a substitute for the Hollywood blockbuster

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<sup>110</sup> Loren, *supra* note 22, at 77.

<sup>111</sup> Jessica Litman, *The Exclusive Right to Read*, 13 CARDOZO ARTS & ENT. L.J. 29, 43 (1994) Fred Anthony Rowley, Jr., Note *Dynamic Copyright Law: Its Problems And A Possible Solution*, 11 HARV. J.L. & TECH. 481, 485-87 (1998).

<sup>112</sup> Loren, *supra* note 22, at 77-78.

<sup>113</sup> Glynn S. Lunney, Jr., *Reexamining Copyright's Incentives-Access Paradigm*, 49 VAND. L. REV. 483, 546 & n.246 (1996).

interpretation of the book or even for the quiet pleasure of reading the book and recreating the characters and events in one's imagination. But clearly some percentage of the relevant population will view these distinct experiences as fungible and as substitutes.

This market substitution policy to protect the copyright owner's right to create derivative works does not appear to be significant in the types of works that are under consideration in this Essay.<sup>114</sup> For example, this Essay presumes that the individual authorizing the derivative work is the lawful possessor of a copy of the underlying preexisting work. In the case of the motion pictures under discussion, a legal, authorized copy is purchased then modified either virtually or physically to remove offensive content. In the case of integrated works, one presumes that the consumer owns a word processing program before buying a spell check program. There is no substitution. There is a one-to-one correspondence between consuming the pre-existing work and the use of the derivative work. The copyright owner gets additional sales without any additional investment.<sup>115</sup> The copyright owner's incentive to invest in the copyrighted work is not diminished.<sup>116</sup> In fact, it has increased.

### 3. Dissemination of New Works

Some commentators argue that by granting to copyright owners derivative work rights, copyright owners are encouraged "to publish" their work at the first feasible opportunity rather than waiting until copyright owners are ready to exploit the market for derivative works.<sup>117</sup> This concern does not reflect the market reality of software. Software publishers sprint to be the first to market a new product.<sup>118</sup> Software publishers would prefer to be first than to be the best. The market environment is such that there is a mad rush to market to satisfy the fickle desires of business and consumers before the market evaporates. The "know-how" or trade secrets

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<sup>114</sup> Loren, *supra* note 22, at 79-80.

<sup>115</sup> The author would like to posit the idea that the owners of copyright and other forms of intellectual property have obligations in addition to rights and duties in addition to privileges. Some real property defenses should be available such as "ameliorative waste." One should not assert that the real property analogy is the best analogy in the digital environment. See, e.g., Dan L. Burk, *The Trouble with Trespass*, J. SMALL & EMERGING BUS. L. 7 (1999).

<sup>116</sup> As one commentator observed, if this incentive is economically significant, the copyright owner is free to employ technological measures that would permit only the copyright owner or her licensees to create derivative works. Loren, *supra* note 22 at 81. If the courts in applying these policy considerations fail to adequately protect the interests of copyright owners in the digital context then under the DMCA, copyright owners may employ digital rights management systems or anti-circumvention technology as a more than adequate self-help remedy. See generally Dan L. Burk and Julie E. Cohen, *Fair Use Infrastructure for Rights Management Systems*, 15 HARV. J.L. & TECH. 41 (2001); Pamela Samuelson, *Intellectual Property and The Digital Economy: Why The Anti-Circumvention Regulations Need To Be Revised*, 14 BERKELEY TECH. L.J. 519, 534-36 (1999).

<sup>117</sup> Loren, *supra* note 22, at 81-82 citing William Landes & Richard Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 354-55 (1989).

<sup>118</sup> JESSICA LITMAN, DIGITAL COPYRIGHT 173 (2001).

embodied in the software provide a significant advantage once the software is on the market. Competitors will have to expend significant time and resources to reverse engineer the pre-existing work before they expend even more time and resources to develop the bowdlerization. While competitors are striving to understand the pre-existing work, the copyright owner may develop or license to others both right to develop new works and the expertise to do so. Similarly, in the case of motion pictures, the studios have a long time advantage to produce a “family” friendly version and the ability to sell the family friendly version as part of the normal advertising for the video. No additional incentive besides that provided by the present market and that which is inherent in the technology is necessary to assure an early diffusion of new software products and to convey a reasonable market advantage to the copyright owner.

The purposes behind granting copyright owner’s the right to create derivative works support a narrow reading of the breath of the derivative work right in the context of digital works because a narrow reading will support the creation of new works by the Copyright owner and adequately protect the copyright owner’s interest in creating derivative works. While a broad open ended, reading would discourage the creating of new works by other authors and reduce the legitimate competition in the marketplace for innovative digital works.

## V. CONCLUSION

The modern Bowdlerizers may be destroying modern digital classics. Future generations studying film as literature may question the wisdom of bowdlerization, the reputations of the directors, producers, actors, and the other talented artists who create films may suffer (in the opinion of those only exposed to the Bowdlerized edition), but this is not the type of harm that the Copyright Act was designed to prevent, i.e., *private* alteration for *personal* and *family* use. Just as in every generation, parents reading to their children skipped parts of stories that were age inappropriate or time inappropriate (e.g., scary parts before bed time), digital bowdlerizing permits parents to accomplish the same goals in a new digital environment. Digital bowdlerizing permits parents or other adults to control the time, place, and manner of their or their children’s exposure to works that in the individual or parent’s unfettered discretion is inappropriate. The difference here is one forced on the modern user of digital works, the efficient and effective method of skipping the offensive parts requires that the employ sophisticated technology, if he or she desires a similar experience that of the average user. Most persons desiring these services do not have either the time or technical competence to create their own templates. Worse, parents would have to subject themselves to offensive content before being able to create a template to create a movie suitable for their family viewing. Thus defeating the much of the purpose of the template.

The copyright owner is free to sell expurgated versions of the work, to produce templates to edit offensive content, or take other market or technological measures to ameliorate the effects of bowdlerization. Nevertheless, just as the copyright owner cannot stop a reader from skipping to the last page of a paper book to find “who dunnit” in a mystery novel, here the copyright owner may not stop a viewer from fast forwarding through content that is offensive or even tedious, as is much gratuitous sex and violence in Hollywood produced cinema. Alternatively, these templates could be used to permit the viewer to avoid tedious plot development and tendentious subplots in favor of sex, blood and gore, just as generations of readers skipped through classic novels and great literature looking for the “good spots.” In either case, its viewer’s or reader’s choice, and copyright law should not be extended to grant statutory control over private uses of copyrighted work.