

The Complexity Dialectic: A Case Study From Copyright Law

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Both political parties have begun to focus greater attention on the growing income inequality in the United States. Economists and politicians have identified a wide range of possible causes of this inequality, which in turn has led to divergent proposed policy solutions. While there probably are many factors contributing to the inequality, one factor has received relatively little attention: the nature of the U.S. political system encourages increasingly complex regulatory frameworks, which benefit those with more resources to navigate those frameworks. As the frameworks get more complex, the advantage of those with resources increases.¹

Without doubt, federal and state legislatures and executive agencies are responsive to industries with great lobbying power, which often enables these industries to tilt regulation in their direction, either by diminishing their compliance obligations or increasing those of their competitors. But here I'm making a subtler point. When confronted by stakeholders with competing interests, political institutions attempt to reach accommodations, which tend to increase the complexity of the disputed regulation. This complexity by itself benefits those with more resources. Thus, to some extent, the very responsiveness of political institutions inadvertently contributes to inequality.² And even more ironically, as the political process becomes more open to more stakeholders, more complexity may ensue, which in turn could limit the gains obtained through greater participation. (While much of the complexity is an unintended by-product of the responsiveness of political institutions to stakeholders, some stakeholders may intentionally inject complexity precisely because it benefits them.)

I suspect that this dynamic, which I term the complexity dialectic, occurs throughout our economy, but I discuss it here with an example from the field with which I am most familiar: copyright law.

¹ An economist might phrase the argument as complexity has intra-societal distributional consequences, which apply regressively.

² The notion that legal complexity can contribute to inequality is nothing new. After all, the Supreme Court has recognized that for the Sixth Amendment right to counsel to be meaningful for people of modest means, the government must pay for counsel for defendants in felony cases who cannot afford to retain counsel themselves.

I. The Circumvention Prohibition of the DMCA

Our system of checks and balances has led to what is referred to as the iron law of consensus.³ Because legislation can easily be blocked, particularly in the Senate, where rules allow holds and filibusters, legislation typically can get enacted only with the consent of all significant stakeholders. Indeed, the actual legislative language often is the product of negotiations among stakeholders, under the supervision of Congressional staff. The negotiations can occur in many stages as the legislation moves forward through the committees of jurisdiction in both chambers. The legislation almost always becomes more complicated as more stakeholders emerge or as more Congressional champions raise additional concerns.

The prohibitions in the Digital Millennium Copyright Act (DMCA) on the circumvention of technological measures that control access to copyrighted works or that prevent the infringement of copyrighted works followed this path. The initial prohibition proposed by the Clinton Administration in 1995 was a 75-word sentence banning the manufacture of a device whose primary purpose was to circumvent any system that prevents the infringement of a copyrighted work. By the time of its enactment in 1998, this provision ballooned to 4,032 words.

How did this happen? First, copyright owners succeeded in expanding the prohibition on devices that circumvented copy controls to devices that circumvented access controls.⁴ Further, the copyright owners convinced allies in the Congress and the Administration to prohibit the act of circumventing an access control as well as the manufacture of circumvention devices.

This dramatic expansion of the circumvention prohibitions precipitated the emergence of a wide variety of entities that argued that the prohibitions could have the effect of preventing legal activities with legally made and acquired copies. The raising of these concerns led members of the House and Senate Judiciary Committees at various stages of the legislative process to direct stakeholders to engage in negotiations to address these concerns. These negotiations resulted in various limiting provisions such as definitions, savings clauses, and exceptions.

The breadth of a limiting provision turned on the political power of the stakeholder seeking it. The consumer electronics industry secured a strong “no mandate” provision in 17 U.S.C. § 1201(c)(3) that specified that manufacturers were not required to design their products to respond to any particular technological measure. This ensured that products would not have to respond to inconsistent types of protection or be retrofitted when new types of protection

³ See Thomas Olson, “The Iron Law of Consensus: Congressional Responses to Proposed Copyright Reforms Since the 1909 Act,” 36 *Journal of the Copyright Society* 109 (1989).

⁴ For a more detailed discussion of the DMCA’s legislative history, see Jessica Litman, *Digital Copyright* (2000). See also Jonathan Band, *Interfaces on Trial 2.0* (2011) at 73-93, available at <http://mitpress.mit.edu/books/interfaces-trial-20>.

were adopted. Likewise, the exception in 17 U.S.C. § 1201(f) for reverse engineering for purposes of interoperability, lobbied for by technology companies such as Sun Microsystems (now owned by Oracle), was quite broad. In contrast, the exception for libraries in 17 U.S.C. § 1201(d) was so narrow as to be useless. In response to the libraries and other stakeholders that had remaining concerns with the DMCA, the House Energy and Commerce Committee created a rulemaking process, codified at 17 U.S.C. § 1201(a)(1)(C), for the adoption of additional exemptions.

II. The Triennial Rulemaking

As a function of the negotiating process between the stakeholders and their Congressional supporters, the DMCA's rulemaking framework is complicated. The DMCA requires the Librarian of Congress to conduct a rulemaking every three years to determine whether the prohibition on circumvention will adversely affect the ability of users of particular classes of copyrighted works to make non-infringing use of those works. The statute directs the Register of Copyrights (the head of the Copyright Office, which is part of the Library of Congress) to make a recommendation on the granting of exemptions to the Librarian of Congress after consulting with the National Telecommunications and Information Administration (NTIA) within the Department of Commerce. The Librarian is not required to follow the recommendations of either the Register or the NTIA.

Significantly, each exemption automatically sunsets after three years. This means that the beneficiaries of an exemption must go through the rulemaking process every three years in order to renew the exemption. Additionally, the Copyright Office has converted the rulemaking into a quasi-adjudicatory proceeding, with burdens of proof, rounds of submissions, and formal hearings. Thus, every three years the Copyright Office requires an entity seeking renewal of an exemption to bear the burden of proving from scratch (*de novo* in legal terms) that the prohibition on circumvention will adversely affect the entity's ability to make a non-infringing use of a class of works.

Moreover, as the number of requests for exemptions has increased, the Copyright Office has adopted procedural requirements that increase the burden on applicants. In the current rulemaking, the Copyright Office required applicants to make an initial submission identifying the classes of works from which they sought an exemption. Based on these initial submissions, the Copyright Office created 27 classes of works, and required applicants to make separate submissions for each class for which they sought an exemption, even though the classes were related. Thus, the Copyright Office created separate classes for the educational uses of audiovisual works in: 1) colleges and universities; 2) primary and secondary schools (K-12); 3) Massive Open Online Courses (MOOCs); and 4) educational programs operated by museums, libraries, or other nonprofit institutions. By balkanizing the problem of the use of audiovisual works in different learning environments in this manner, the Copyright Office has placed a much greater burden on the applicants for each class to meet the evidentiary standard the Copyright Office has imposed.

Likewise, 14 of the 27 proposed exemptions concern situations where the work protected by the technological measure is a software component of a hardware device owned by the user. In other words, the exemption would allow the owner of a hardware product to make a use of her personal property obstructed by the DMCA. The Copyright Office could have considered a broad exemption for all software essential to the operation of hardware in the lawful possession of the user. Instead, the Copyright Office drew up the classes as narrowly as possible.

Five of the proposed exemptions involve the “unlocking” of different kinds of devices so as to connect them to an alternate wireless network. The Copyright Office creates separate classes for: 1) telephone handsets, 2) tablet computers, 3) wearable computing devices, 4) mobile connectivity devices, and 5) consumer machines such as smart meters.

Another five of the proposed exemptions involve the “jailbreaking” of devices so that they can access alternate lawful content. The Copyright Office creates separate classes for: 1) telephone handsets, 2) all-purpose mobile computing devices, 3) dedicated e-book readers, 4) video game consoles, and 5) smart televisions.

Two of the exemptions involve vehicle software. One exemption would permit the circumvention of TPMs on software that controls the function of motorized land vehicles for the purpose of diagnosis and repair, or after-market personalization. A second exemption would allow the circumvention of the TPMs on such software for the purpose of researching the safety or security of the vehicles. The Copyright Office decided to narrow these classes only land vehicles, although the same issue obviously will arise with boats and airplanes.

The exemptions issued by the Librarian of Congress (upon the recommendation of the Copyright Office) have also grown increasingly complex. The number of words in the exemptions increased from 35 words for two exemptions in the 2000 rulemaking cycle to 239 words for four exemptions in the 2003 cycle to 567 words for six exemptions in the 2006 cycle to 961 words for six exemptions in the 2010 cycle to 1,172 words for five exemptions in the 2013 cycle. The exemption for using excerpts of audiovisual works increased from 100 words in 2010 to 752 words in 2013. The average number of words per exemption increased from 17.5 in 2000 to 234.5 in 2013.

The growing complexity of the rulemaking process and the resulting exemptions can be seen as the inevitable result of the conflicting pressures stakeholders place on the Copyright Office. Libraries, educators, and consumers request the renewal and expansion of existing exemptions, as well as the adoption of new ones. The copyright owners, for their part, vigorously oppose the exemptions, typically arguing that alternatives to circumvention exist. The most notorious example of this approach was when the Motion Picture Association of America asserted in two rulemakings that educators did not need to circumvent the technological protections on DVDs to harvest clips for classroom use because the educators could just camcord the clips off of a high definition television. In support of this argument, the MPAA submitted in evidence a video demonstrating the ease of

camcording films.⁵ The Copyright Office attempts to reconcile these conflicting pressures through increasingly convoluted exemptions. Thus, under an exemption granted in 2013, a person could circumvent the Content Scrambling System on DVDs when she

believes and has reasonable grounds for believing that circumvention is necessary because reasonably available alternatives, such as noncircumventing methods ... are not able to produce the level of high-quality content required to achieve the desired criticism or comment on motion pictures, and where circumvention is undertaken solely in order to make use of short portions of the motion pictures for the purpose of criticism or comment...for educational purposes in film studies or other courses requiring close analysis of film and media excerpts, by college and university faculty, college and university students, and kindergarten through twelfth grade educators.

III. The DMCA and Inequality

So how does this growing complexity increase inequality? The initial expansion of the DMCA from restricting the circumvention of copy controls to restricting the circumvention of access controls was intended to prevent people from getting access to content they had not paid for, e.g., accessing premium channels on cable systems or password protected games on websites. But the overbreadth of the language of the expansion resulted in copyright owners having more control over lawfully acquired content. This favored copyright owners over legitimate users. As noted above, the more politically connected entities that would be adversely affected, such as consumer electronics manufacturers or developers of interoperable software, were able to obtain limiting provisions that somewhat leveled the playing field. But less politically connected users or entities that did not exist at the time of the DMCA's enactment had to rely instead on the rulemaking proceeding.

The triennial rulemaking has evolved into a complex undertaking that is difficult, if not impossible, for individuals or entities to navigate successfully without retaining counsel. Some entities that secured exemptions in one cycle chose not to go through the effort to renew the exemption in a subsequent cycle. Others entities have struggled to renew their exemptions. For example, in one cycle, the Register of Copyrights recommended against renewal of an exemption that allowed the circumvention of technological measures on e-books so that the visually impaired could use screen readers. The Register found that the associations had submitted insufficient evidence to warrant renewal, but the Librarian of Congress renewed the exemption any way. Fortunately, in this rulemaking cycle, the Samuelson-Glushko Technology Law & Policy Clinic at the University of Colorado Boulder has prepared an extensive submission for these associations.

⁵ A video of the MPAA's demonstration can be found at <https://vimeo.com/4520463>.

Without the participation of law clinics such as those at the University of Colorado, the American University, U.C. Berkeley, U.C. Irvine, and Harvard's Berkman Center, as well as advocacy groups such as the Electronic Frontier Foundation, Public Knowledge, and my client the Library Copyright Alliance, the rulemaking would be a complete debacle for the public. This is because of the asymmetry of economic interests. The ultimate beneficiaries of the exemptions are individual consumers, creators, educators, or students. Opposing the exemptions are the trade associations representing copyright owners. In past rulemaking cycles, a joint opposition was filed by the Association of American Publishers, the American Society of Media Photographers, the Business Software Alliance, the Entertainment Software Association, the Motion Picture Association of America, the Picture Archive Council of America, and the Recording Industry Association of America. Apple opposed the exemption for jailbreaking, and all the major wireless networks, represented by CTIA-The Wireless Association, opposed the cell phone unlocking exemption. On occasion commercial interests have supported specific exemptions, but their firepower simply does not compare with that of the copyright owners.⁶

Notwithstanding the great work of the law clinics and advocacy groups, the complexity of the rulemaking has led to an arbitrary tapestry of exemptions. If an entity is able to find a clinic to represent it, then it stands a chance of getting at least a narrow exemption. But there are not enough clinics to represent all the individuals and entities adversely affected by the DMCA who cannot bear the cost of seeking an exemption on their own.

Moreover, the Copyright Office's tendency, at the insistence of copyright owners, to recommend very narrow exemptions has resulted in unfair distinctions that prejudice certain users. The "jailbreaking" and cell phone unlocking exemptions apply only to telephone handsets and not to tablets, even though there is no substantive basis for disparate treatment. The exemption for audiovisual works for educational uses is available to college students but not to high school students taking Advanced Placement classes.

Further, the increasing complexity of the exemptions issued by the Library of Congress make them harder for their beneficiaries to understand and use. The 752 word exemption for audiovisual works in 2013 is far more difficult for educators to use than the 100 word exemption in 2010, even though the 2013 exemption actually is broader in certain respects.

While this discussion has focused on the adverse impact of the complexity of the DMCA on certain classes of users, the complexity of other parts of the copyright

⁶ Perhaps the clearest example of this occurred in the 2013 cycle, when the Librarian of Congress did not renew the exemption for cell phone unlocking. Companies interested in providing cellphone unlocking services participated unsuccessfully in the rulemaking. For a more detailed discussion of the cellphone unlocking controversy, see Jonathan Band, *The End of the Cell Phone Unlocking Saga?*, available at <http://infojustice.org/wp-content/uploads/2014/07/band-end-of-cell-phone-saga.pdf>.

law have a negative effect on individual authors. For example, 17 U.S.C. § 203 allows for the termination of a transfer or license of copyright for a five-year period beginning 35 years after the execution of the transfer (e.g., termination of an author's grant of a license to a publisher). This provision is so complicated, however, that it likely would be used only by the most successful authors who could afford sophisticated legal counsel. Likewise, the complexity of the copyright law and the expense of litigation make it difficult for individual photographers to enforce their rights against advertising agencies that use their photographs without authorization. This has prompted photographers and other individual creators to call for a copyright small claims court.⁷

IV. No Escape From the Complexity Dialectic

Much of the complexity of the DMCA—and the resulting inequality—could easily have been avoided had Congress adopted a narrower circumvention provision at the outset. Specifically, it could have prohibited only acts of circumvention, or circumvention devices, intended to facilitate infringement. In other words, Congress could have required a nexus between circumvention and infringement for circumvention liability to attach.⁸ However, the copyright owners who sought the prohibition, and their supporters in Congress and the Administration, believed that an intent standard would be too difficult to meet in some cases. Given the choice between drafting the legislation to be over-inclusive or under-inclusive, they predictably elected to draft the legislation to be over-inclusive. This natural tendency toward over-inclusiveness probably was reinforced by their awareness that because of the difficulty of passing legislation, they might only have one bite at this apple. The overbreadth forced stakeholders interested in legitimate circumvention to seek exceptions from the overbroad prohibition, and complexity ensued.

This same basic dynamic occurs in most legislation. The proponents seek the broadest possible language, resulting in over-inclusivity. Because of that starting point, opponents have little choice but to seek exceptions, and the proponents demand exceptions to the exceptions. Subsequent developments can engender amendments that further encrust the statute. If the statute is administered by a regulatory agency, an over-layer of regulations adds complexity. The resulting framework is so complicated that only well-represented parties can take full advantage of its provisions. This complexity dialectic can be seen not only in the

⁷ See <http://copyright.gov/docs/smallclaims/usco-smallcopyrightclaims.pdf>.

⁸ Indeed, the U.S. Court of Appeals Federal Circuit interpreted the DMCA as requiring such a nexus between circumvention and infringement before circumvention liability could attach. In *Chamberlain Group v. Skylink Technologies*, 381 F.3d 1178 (Fed. Cir. 2004), the Federal Circuit found that the circumvention of the TPM on the software in a garage door opener motor by the manufacturer of universal garage door opener remote controls did not violate the DMCA because there was no possibility of infringement. Unfortunately, the Ninth Circuit rejected this approach in *MDY Industries v. Blizzard Entertainment*, 629 F.3d 928, (9th Cir. 2010).

copyright law, but in all fields: the Affordable Care Act, the Dodd-Frank Act, our immigration laws, and so on. Each complex statute contributes incrementally to inequality.

The nature of our political system, with its high level of responsiveness to active stakeholders, virtually ensures this result. In theory, a more data-driven, technocratic system where government officials drafted regulations on Utilitarian (the greatest good for the greatest number) principles would produce simpler, more equitable provisions. Such technocrats likely would start with under-inclusive legislation, which subsequently could be broadened if necessary. However, even a technocratic system is subject to regulatory capture. In any event, that is not how our system operates in the United States.

The best we can reasonably hope for, accordingly, is for policymakers to be more mindful of the complexity dialectic, and to work harder at the outset to resist the pressure towards the over-inclusiveness that initiates it.