Wired Shut: Copyright and the Shape of Digital Culture

By: Tarleton Gillespie

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Reviewed by: Garth Mashmann[1]

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Summary: *Wired Shut* discusses digital rights management and its effects on culture. Throughout the book, technologies are examined in a broad context. After discussing the internet and its foundations generally, Gillespie questions the decisions that have been made regarding the internet. After explaining how file sharing became demonized in public opinion, *Wired Shut* describes the history of three different trusted systems which have met different ends. The cultural implications of Digital Rights Management are considered.

About the Author: Tarleton Gillespie, an assistant professor at Cornell University in the Department of Communication, has affiliations with the department of Science and Technology Studies and Information Science Program. Gillespie is also a Fellow with the Center for Internet and Society at Stanford Law School.[2]

Chapter 1: The Technological Fix

- **Chapter Summary:** This chapter lays the groundwork for the rest of the book. First, the author recites the popularly conceived notion that a new technology may have curative social effects, but also cautions that many previous technologies have not produced the effects that their advocates claimed they would provide. Attention is then turned to copyrights generally. Most importantly, copyright must be addressed in the larger political, social, and legal atmospheres, and cannot be looked at on its own.

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[1] Lead Articles Editor for the Syracuse Science & Technology Law Reporter; J.D. candidate, Syracuse University College of Law, expected 2009.
[2] TARLETON GILLESPIE WIRED SHUT: COPYRIGHT AND THE SHAPE OF DIGITAL CULTURE Back flap (The MIT Press 2007).

- **Chapter Review:** Many technological advances, from the printing press to the Hydrogen Bomb, have been proclaimed as initiating a new age in which previous problems were entirely resolved. Although this pleasant picture has repeatedly been painted, it has failed to come to fruition, largely because these technologies are accompanied by additional problems. The essential premise of those who celebrate new technologies is that new technologies make old technologies pointless and make the human condition more ideal. Although these revelations are rarely this simple, critics often embrace the technological advances rather than address the social and cultural questions they complicate.

  The proponents of the internet fell into this same trap. First, they asserted that education would become universal because of increased accessibility. Furthermore, democracy itself would be perfected by the internet because all individuals would be able to participate in the online debate. However, social ills, such as pornography, have also become more accessible with the advent of the internet.

  The internet has had a greater effect on copyright than many other areas. Copyright, and the protection thereof, that largely remained a concern of corporate lawyers and policy makers, was thrust into the public forum. The internet would soon change how culture was produced, sold, distributed, and consumed. One early question: how would internet affect copyright law? The inception and widespread use of Napster and other Peer-to-Peer networks quickly brought the issue to the courts. Traditionally, the use of a technology had been regulated; however, the Peer-to Peer networks changed that paradigm by regulating the design of the technology to constrain uses. This was made clear by the ruling in the Napster case, which did not shut Napster down, but rather

required monitoring of users and disabling of inappropriate files by Napster. In this way the tool itself was altered to permit some uses while making others impossible.

The methods film and music distributors use to protect their works are based on simple software password protection methods. However, they are expanding their control beyond copying to dictate how consumers buy, share, experience, and interact with copyrighted works. "Technologies choreograph our social activity, often with political consequences, and can be made to do so in increasingly sophisticated ways with digital technology."[3]

The effects of the internet on copyright must be understood in a broad context. Regulatory systems, sometimes called "trusted systems" are currently being built which control users. For instance, DVD players often lack the ability to record, not from a lack of technological availability, but because of specific agreements between manufacturers of DVD players and distributors of licensed material. These technical limitations placed on the users of technologies are often backed by new legislation which goes beyond the scope of traditional copyright protection. To be effective, trusted systems must include a technical achievement, but must also be backed by commercial agreements and the force of law.

"Understanding not only the turn to technology as a regulatory strategy, but also the social, legal, political, and cultural mechanisms by which it is possible, is, at one level, crucial to the ongoing disputes about copyright and the Internet."[4] Not only is the system that is now being created designed to prevent copying, but it also gives distributors of material the ability to establish complex pricing schemes and undermine

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[3] TARLETON GILLESPIE WIRED SHUT: COPYRIGHT AND THE SHAPE OF DIGITAL CULTURE 8 (The MIT Press 2007).
[4] *Id.* at 10 (The MIT Press 2007).

the potential for fair use. The author concludes this introduction by urging lawmakers'

decisions to regulate copyright and technical design to be laid open to public scrutiny and

judged with an eye towards political transparency, social equity, and cultural freedom.

Chapter 2: The Copyright Balance and the Weight of DRM

- **Chapter Summary:** This chapter outlines some of the legal and technological history

   that has led to the differing rights of users of copyrighted material and the creators of that

   material. First, the author explains the motivations for copyright law. Then he discusses

   the advances in Internet technologies and explains two of the original, conflicting views

   of the purpose of the internet. The author then discusses the creation of the trusted

   system and the effects it may have on copyright law as it exists today.

- **Chapter Review:** The copyright law governing the Internet will do more than determine

   how popular music is distributed; many rights associated with copyright are being

   reconsidered in light of the Internet. The definition of a copyright could potentially

   change because the Internet has set in motion many new questions regarding settled

   issues in copyright law.

   Initially, it is important to understand that the aim of copyright law was not to

compensate authors for their work, but to provide scientists and artists with input from

their peers, improving all endeavors. Both science and art depend on the communication

of ideas. Originators of ideas are encouraged to relinquish their ideas with some

incentives, such as the one provided by copyright. A balance between the interests of the

originators and users must be reached. While copyright has been described as a form of

property, there are important differences between intellectual property and real property.

Real property is consumable; intellectual property is not. Intellectual property can easily be duplicated in a way that real property cannot.

New technologies tend to make duplication of original works easier. The Internet, specifically designed to transmit exact copies of information long distances, is the culmination of duplication technologies. The Internet was initially viewed in two prevailing ways. The first, the Netizen vision, utilized the Internet for the free exchange of ideas with, ideally, no need for governmental regulation. Many of the proponents of this view felt the Internet was the end of copyright. The other view is referred to as the Clinton-Gore vision. This second view of the Internet was of a perfect marketplace, with increased governmental support for distributors who were willing to put content onto the Web.

Music and other forms of intellectual property are easily converted into digital forms and duplicated. Napster made user-to-user communication, as well as copyright infringement, easier. A brief synopsis of legal proceedings surrounding peer-to-peer networks explains the legal standard which is in effect for these services today. The Supreme Court stated that the producers of the file sharing software had to actively encourage users to violate copyrights in order to be held liable for facilitating infringement. The distributors of music had reason to fear; they believed that many of America's youth thought music was supposed to be free.

The author next examines Digital Rights Management (DRM) and how "trusted systems" work. On a basic level, files are encrypted so that they may only be accessed with keys. However, encryption only protects against casual infringers. A second level must be designed that could prevent those who seek access through encryption. This

second tier of protection consists primarily of devices with knowledge of purchase. These devices would essentially know and only allow access to files in ways that a particular user has agreed to pay for. The goal of the second system is to create a system of black boxes of which the user is unaware. In essence, the trusted system turns copyright on its head. Under copyright protection users are ordered to respect the rights of the designer; the trusted system only allows access if the user has agreed to respect the rights.

The chapter concludes with a discussion of how fair use is affected by the trusted system. Most importantly, the trusted system removes all uses which are not specifically approved. Fair use typically consists of uses that the trusted system would prohibit. This highlights the difference between the trusted system, a system designed by corporations for their own interests, and the legal system which currently governs copyright. Essentially, the copyright system, which balances the rights of artists and the rights of the public, could be erased by the trusted system, which is designed by corporations and only promotes their interests.

Chapter 3: The Speed Bump

- **Chapter Summary:** Technologies are not only affected by social, cultural, and economic environments, but also change those environments. Technologies involve a bargain between designers and users. This bargain results in technology acceptable to users. Without a change in the legal, cultural, and economic environments, new technologies will be rejected.

- **Chapter Review:** All technologies are affected by surrounding social constructs and values. They are also affected by the laws people choose to apply to them. The law itself

is a technology and is affected by decisions of individuals and societies. Choosing a technology must be accompanied by decisions in law and cultural legitimization.

While some people claim that technologies are neutral, others suggest that they are revolutionary, The relationship between technology and society is somewhere between these two extremes. To illustrate this point, the author examines the speed bump. While the speed bump itself has an effect on drivers (society), the speed bump is a technology and its implementation was a decision made by society.

Decisions in architecture are made consciously to affect people. Another example of a socio-technological decision is the bridges to Long Island from New York City which did not accommodate busses, keeping poorer people from using beaches on the island. Another conscious decision in technology was to set a Caucasian skin tone as the default in photograph chemistry. However, these examples can be altered by the social context in which they are examined. Once a technology is examined in a larger context, the context can be expanded to include almost anything. For example, the choices surrounding a speed bump can ultimately be traced to wars in oil rich lands.

The decisions to implement new technologies necessarily have consequences. The implementation of a technology is necessarily discriminatory. A new technology will only permit some users and uses. Even a technology as simple as a door with a hydraulic closer discriminates. Those who cannot physically open the door because of their strength or size are discriminated against, as well as people who need the door to remain open, such as delivery people. To return to a previous example, the speed bump discriminates against not only bicyclists who are not speeding, but also against those with

the right to speed, such as ambulances. The decision to implement a new technology is long lasting.

As previously mentioned, designers must make choices when designing a new technology. However, they cannot disregard the user in the design process. For example, designing tools in software applications which resemble what they are supposed to do, such as "crop," have been implemented in some programs. These tools and their capabilities may ultimately shape the user as much as the user may shape the tools. The implementation of a new technology can only succeed when the bargain between the designer and the user modifies the technology.

Technologies, or artifacts, are discussed differently at different points of their existence. They are continuously shaped by cultural and political discussions which evolve around them. Often, changes in society result in a change in an artifact, whether that is a change in the perception of the artifact or a change in the political climate which includes the artifact. Either of these changes can happen to something as simple as the speed bump. The political and societal "negotiation[s] [don't] end when the technology is built or deployed, but continue[] on through its use."[5] All technologies and to some extent tools, particularly tools in information technology, impose restrictions not only on the person who chooses the tool initially, but also on those who wish to see and use the product of the work done with that tool despite this struggle.

There is a difference between regulating copyright by the use of technology and by law. The law is public and available, and while it may not easily be changed by anyone, change is still a possibility. Software is much more restrictive because it is not visible and cannot be easily changed. A system of technology, capable of hiding

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[5] TARLETON GILLESPIE, WIRED SHUT: COPYRIGHT AND THE SHAPE OF DIGITAL CULTURE 84 (The MIT Press 2007).

copyright from public view, can ultimately wrest control of copyright from the public domain and limit the control to a few interested groups. Not only does technology advance, but cultural, political, and social environments must be advanced with the technology. Complex digital systems require a change in legal, economic, and cultural arrangements.

Chapter 4: A Heroic Tale of Devilish Piracy and Glorious Progress by Jack Valenti

- **Chapter Summary:** This chapter examines the rhetoric used by the film industry to reduce file sharing to an illegal and immoral activity. Jack Valenti was a major player in redefining file sharing as a consummate evil of the Internet. In addition to causing a cultural recession, he claimed, file sharing would destroy the American economy. The use of forceful rhetoric and scare tactics led to public disdain for file sharing and the pirates who practiced it.

- **Chapter Review:** The first matter considered was the cultural environment of the Internet. Initially the government intended to take a hands off approach towards the Internet. Peer-to-peer networks initially erupted in popularity and were embraced by a wide variety of users. In order to change initial perceptions the holders of the copyrights had to control the conversation about file sharing and define the participants. The music and film industries had to paint a dark picture of cultural collapse; file sharing would lead to a cultural dark age.

  Jack Valenti was a main character in the film industry's endeavors to label file sharing as immoral. He was a lobbyist and effectively used fear to convince Congress to enact legislation to protect films. Valenti labeled the film industry as a cultural boon

which was threatened by internet pirates who would cause films, and thereby culture, to no longer be produced.

Valenti's argument began with the assertion that the film industry was such a powerful force that the U.S. economy would deteriorate if the film industry was threatened. The most persuasive image Valenti found was to label file-sharers as pirates. This image went hand in hand with the most essential argument of the film industry: file sharing is theft. While large file sizes and slow connection speeds initially protected the film industry, increasing broadband access and memory technology made a preemptive strike necessary. Valenti needed a persuasive victim, and he found one in artists and other employees of the film industry whose livelihoods were "threatened" by file sharing. Without protection, the movie industry would be unable to put content on the Internet, thus endangering the existence of the Internet itself. Furthermore, development in the digital technologies, such as online distribution methods, could not come to fruition if piracy continued. These problems put the financial health of the film industry and by extension, the entire country at risk.

The next tenant of the argument is that it is immoral to share copyrighted files online. This is based on the politics of fear, manipulating the public and public opinion with scare tactics. This tactic needs a believable and imminent fear to work. After a fear is established, the moral question must be publicized in a way that the only answer seems to be in favor of those generating the fear. File sharing was demonized as being antithetical to democracy at its very base. However, the film industry disguised the substantive questions, such as "[i]s downloading music the same as theft of material

property?"[6] After public opinion had begun to turn against file sharing, Valenti strengthened his rhetoric, even suggesting that piracy and terrorism are connected. Those who share files are guilty of abhorrent crimes because file sharing can be used to commit some crimes, the argument began. File sharing and copyright violation were linked through the politics of fear to other concerns such as pornography and identity theft. While stronger copyright protection does not affect these additional problems, shutting down file sharing services does. It also forces those who oppose the shut down of file sharing to be viewed as proponents of identity theft and pornography.

There were at least two issues with Valenti's rhetoric. First, he was demonizing consumers. Second, part of his argument attacked the Internet itself. These arguments made the movie industry appear both anti-consumer and anti-technology. These problems could be solved with a "celestial jukebox," which would strengthen copyright protection while lauding the values of the Internet. This jukebox would ultimately save the Internet as well as the movie industry.

Valenti and the music industry were able to control the discussion surrounding file sharing. They redefined the players, and recast their roles. Actors and others employed in the movie industry became helpless victims of the evils of file sharing, and strengthened copyright protection was the valiant hero. Aside from this story, file sharing was cast as a conspirator with the worst of the Internet, namely pornography, identity theft, and terrorism. Using these and other tools, the film industry was able to change public opinion regarding file sharing, and used the rhetoric to convince courts to effectively eliminate the threat.

Chapter 5: Why SDMI Failed

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[6] TARLETON GILLESPIE, WIRED SHUT: COPYRIGHT AND THE SHAPE OF DIGITAL CULTURE 121 (The MIT Press 2007).

- **Chapter Summary:** SDMI was a method for protecting copyright in music. It was an agreement between the music industry and consumer electronic manufacturers. The goal was to make the use and playing of music possible for those who paid a fee and to reduce the ability of hackers to play music. The initiative failed because the different partners of the consortium pulled in vastly different directions, and the cultural environment was not receptive to restrictions.

- **Chapter Review:** There are two main ways that materials can be protected. First, through the court system, copyright owners can intervene when someone has abused their work. A second method is to control access to the copyrighted materials.

    Standards setting organizations have become increasingly important with the recent boom in Internet technologies. Official organizations for a wide variety of standards tend to be slower than the evolving technology. To compensate for the delays that the official organizations cause, there are a large number of industry consortia, which choose standards for their fields. While the companies in the consortia are interested in the technologies, they do not violate price fixing regulations because their actions are seen as a benefit to technology. Furthermore, standards are typically seen to encourage competition rather than discriminate against it.

    One early consortium was the Secure Digital Music Initiative (SDMI). It was started by the RIAA because of the dangers mp3s posed to musical copyrights. This danger was heightened by the introduction of the mp3 player, which would greatly increase the popularity of mp3s. The problem was complicated by the large number of music labels which could result in different standards and different platforms. Standards

which varied from label to label would most likely anger consumers and could start a 'consumer revolt.'

SDMI created a system which would rely on digital water marks. Portable music devices would recognize and play files with and without watermarks. After these devices were largely accepted, a second phase would begin. When devices detected a second or fragile watermark they would begin to question files and stop playing pirated copies. The deal required record companies, which wanted to limit copying and freedom, to compromise with consumer electronics manufacturers, who wanted to give users as much freedom as possible.

Although SDMI appeared to be a suitable approach to copy protection, it failed before it ever really began. Part of the problem was a conflict between parties in the consortium. Many of the consumer electronics companies were designing not only SDMI compliant devices, but also devices which did not function on SDMI. The second phase watermark never came to fruition. Finally, the partners of the coalition stopped meeting, and SDMI was doomed to fail.

SDMI did not fail for one reason, but because of many contributing factors. First, not all of the members of the consortium shared the same interests and pulled against one another, resulting in slow, and often no progress. Another issue was a change in the way music and the internet interacted. While SDMI was being developed, users began using Napster and other peer-to-peer networks, mp3 players became available, burning CDs increased in popularity, and people began playing music directly from their computers.

Chapter 6: Protecting DVDs: Locks, Licenses and Laws

- **Chapter Summary:** The movie industry has been able to develop a trusted system and implement it. The essential ingredients of a pay-per-view system and the ability to hold back content from distributors, gave the movie industry more power than the recording industry. By using encryption and changing the law to protect their interests, the movie industry was able to create a system in which piracy is virtually impossible.

- **Chapter Review:** The film industry's success in creating a trusted system contrasts with the music industry's failure. Movie producers have the advantage of being able to encrypt their content. This gives them leverage against the producers of devices, in effect creating a lock. In addition, movie producers gained the support of the law, which could be used to catch lock pickers. The system of control regulates not by prohibiting certain acts, but by rendering those acts virtually impossible.

    DVDs are different from CDs and other forms of media because they are encrypted. This encryption regime was designed before any digital films were released. By encrypting DVDs, electronics manufacturers were forced to create devices which conformed to the film industry's desires. These devices prevented recording. This, in combination with encryption, which stopped viewing on illegal devices, prevented mass copying and distribution of illegal copies of movies. When the encryption was eventually broken, film makers had the power of law to force cooperation.

    This law was brought about through multiple attempts to extend copyright protection. The extension protected the content delivery means in addition to content. The film industry's goal was laws making it illegal to break though protection on movies. Although the initial attempts were rebuffed, a treaty orchestrated by the World Intellectual Property Organization gave lobbyists a second bite at the apple. The film

industry didn't make the same mistakes. The case of *Universal v. Reimerdes* showed how powerful the new law was. In effect, fair use was walled off by restricting access to a technically capable few. In addition to the new laws that were created for their protection, many media companies have turned to click-wrap or shrink-wrap licenses. These licenses substitute the distributor's terms for copyright law. The law essentially forces electronics manufacturers and viewers to accept the terms of the movie industry's licenses.

Chapter 7: Raising the Broadcast Flag

- **Chapter Summary:** Chapter 7 discusses the efforts of the TV industry to create a trusted system during the switch to digital television. Potential pirates could steal content from digital television, but not from analog television. If TV producers could regulate the downstream distribution of their content they could stop pirates. The legal tool producers sought to employ the FCC. However, this legal tool failed in the first round of legal battles, and the digital television industry is attempting to find a new way to get legal protection.

- **Chapter Review:** Sensing the possibility that content could be taken from digital television, producers sought to protect their material. Their approach required integrating consumer technology advances with some type of encryption so content could not be reproduced without permission from a digital device. Television providers relied on rhetoric similar to the rhetoric employed by the movie industry. Peer to peer file trading threatened the content of television, and ultimately threatened a cultural collapse. Digital television would certainly fail without the support of television providers.

The technological solution came in the form of the broadcast flag. The flag would prevent copying like encryption does. Only devices that could decode the flag would be able to display the signal. These devices would not be able to record the signal, or send the signal to devices capable of recording it. To achieve this system television producers required governmental support. This came from the FCC, which believed it had the authority to deal with any matter relating to television distribution. With governmental support, television manufacturers were willing to accept the broadcast flag. However, the governmental support soon waned; the court system found the FCC could not regulate without a directive from congress.

While trusted system has not yet been implemented for digital television, that possibility has not been foreclosed. The large number of industries with varying interest probably means that the government will have to be significantly involved in bringing about any effective trusted system

Chapter 8: Effective Frustration

- **Chapter Summary:** This chapter discusses how the efforts of tinkerers have been frustrated by Digital Rights Management (DRM) strategies. While typical technologies have been laid open to their users, DRM renders digital technologies unavailable. A good comparison is the automobile. Automobiles can be changed by the consumer, DRM renders change in digital technologies impossible.

- **Chapter Review:** Digital Rights Management effectively locks technologies within a box. This box is impenetrable to users both legally and technologically. The technology can only be changed by those who are authorized to change it and can only perform the

functions it was designed to perform. Tinkerers who would change the form of a technology cannot alter the machine without breaking it.

This approach stands in contrast to another movement which is popular among many software users. This is the open source approach. In open source, anyone who is admitted to the community is allowed to make changes to the design. Admission to the community is a low bar; anyone who wants to use and contribute to the technology is allowed to. Multiple users strengthen software in many ways. They increase security, the number of features, and user friendly qualities. While technologies protected by DRM are handed down from higher authorities and do not easily evolve, open software technologies evolve constantly and are continuously becoming better as more users adopt them.

Older technologies, such as the automobile, have been improved by the open source approach. However, DRM shuts users out of this traditional role, reducing them from a participant in technology and culture to a passive consumer of both.

Chapter 9: The Cultural Implications of Encryption

- **Chapter Summary:** This chapter summarizes the arguments for and against Digital Rights Management, particularly encryption's effects. Encryption prevents unauthorized users from accessing secret information. In trusted systems encryption can stop users from accessing and altering culture in ways traditionally protected by copyright law.

- **Chapter Review:** Encryption was designed to protect secrets. Initially, only the military could afford protection for their secrets. This has lead to the specific language of encryption, particularly "threat, attack, distrust, secrecy, vulnerability and the risk of

cataclysm."[7] This is particularly enlightening in the case of DRM where the receiver of

encoded information is the device, and the potential outside threat is the human user.

DRM is able to encrypt messages and protect them from copying, but is also able to

regulate what a user does with the information in the message.

Digital Rights Management not only imposes copyright rules on consumers, but

also enforces other conditions which are favorable for the film industry. Regional

coding, which happened accidentally with video cassettes, has been intentionally

implemented with DVDs. Regional coding allows the film industry to enforce price

differentiation and other favorable characteristics in different markets.

DRM is creating a pay per use society. In essence, digital rights are being exerted

to require users to pay for each use. On the internet users are required to give more

information about their purchases as well as other personal information to distributors.

While this information is currently used to target advertising towards users, it could be

used to charge different prices to different users based on what and how much they

purchase. The digital age, along with digital rights management, is altering the essential

way in which people interact with culture. Trusted systems are changing culture from

something people interact with into something they consume.

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[7] TARLETON GILLESPIE WIRED SHUT: COPYRIGHT AND THE SHAPE OF DIGITAL CULTURE 254-5 (The MIT Press 2007).