Taking the copyfight online: Comparing the copyright debate in congressional hearings, in newspapers, and on the web

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This article examines the rhetoric around copyright and the regulation of digital rights management (DRM) from 2003 to 2006 in congressional hearings, in major newspapers, and on the most prominent relevant websites. The article describes a new combination of methods for identifying a set of online documents to compare with offline documents via content analysis. These three media present very different views of the copyright debate. Hearings present a rough balance of both coalitions' messages. Newspapers lean slightly toward stronger fair use but have little coverage. The online debate features a deluge of strong fair use arguments. These findings highlight different communication strategies and suggest broader lessons about the changing nature of policy advocacy and the policymaking process.

Introduction

The internet's dramatic rise over the last 15 years has led communication scholars to a new focus on citizens' efforts to organize and communicate their political views. Scholars have studied new media mobilization in contexts ranging from protests against the WTO (Bimber, 2003) and the invasion of Iraq (Bennett, Breunig, & Givens, 2008) to media policy advocacy (McChesney, 2004; Napoli, 2009). Yet despite these valuable studies, we still know little about political communication within the day-to-day workings of ordinary policymaking. As with the study of political communication generally, the bulk of work examining the political impact of new media focuses on elite communication with the public, especially as embodied in electoral politics (Rethemeyer, 2007). The internet helps shape electoral outcomes, and it may help legitimize some elements on the political margins, but few scholars have asked whether the internet is changing policy outcomes (Bimber, 2003). As Rethemeyer (2007) argues, "elections do not generate the policies that people resent—policy processes do. So far, we know little about the Internet's role in this critical social activity" (p. 199). Even cyberactivism research generally focuses not on policy advocacy, but "activist sub-politics" (Bennett, 2003, p. 148).

To date, there are few systematic studies of strategic communication within specific policy debates, grounded in theories of the policymaking process. To use Waples' (1942) classic formulation, "Who communicates what to whom by what medium, under what conditions, and with what effects?" (p. 907),

political communication researchers have produced few studies in which the communicators are policy advocates, the conditions are policy debates of less than front-page visibility, and the effects are policy outcomes. Among the many good reasons for a new focus on issue advocacy, the internet may be reshaping the conditions of policy advocacy and even changing policy outcomes. This impact may be small or large. As in any study of media effects, however, scholars must first assess the differences between the communication stimuli of interest. Before looking for effects the internet may be having on the policymaking process, scholars still need to answer, ''Who communicates what . . . by what medium?'' This study is one small contribution to an answer—a study of political communication following on the work of scholars like Bruce Bimber (Bimber, 2003; Bimber, Flanagin, & Stohl, 2005). It is about the politics of copyright specifically, adding quantitative detail to a field populated with critical, historical studies (Boyle, 2008; Gillespie, 2007; Litman, 2000; Vaidhyanathan, 2004). Yet the core question, ''Which policy advocates communicate what messages in which media?'', could be asked of any visible, contested policy issue. Thus, this study hints at broader implications for political communication and new media.

Copyright, DRM, and the Policy Battle

The internet has fundamentally reshaped the nature of copyright. Changes include increases in infringement and the difficulty of enforcement (Boyle, 2008, pp. 54−82), as well as a decrease in the importance of copyright as an incentive to produce and distribute some kinds of content (Benkler, 2006). Despite copyright holders' legislative successes (*Digital Millennium Copyright Act*, 1998; *No Electronic Theft Act*, 1997) and extensive litigation, millions still trade illicit files. In response, the ''strong copyright'' (or SC) coalition—copyright holders and their political supporters—calls for ever-stronger copyright to combat the ''internet threat'' (Boyle, 2008, pp. 54−82). On the other side, the ''strong fair use'' (or SFU) coalition opposes copyright's expansion, supports a widening of copyright exceptions such as fair use, and invokes the cause of internet freedom. Members include scholars, librarians, educators, NGOs such as the Electronic Frontier Foundation (EFF) and Public Knowledge, and a few allied policymakers (Herman, 2009, pp. 68−77). Their heavy reliance on internet communication inspired this study.

The copyright debate revolves around many topics, so I focus on one: the regulation of digital rights management, or DRM. A DRM system is an attempt to use digital technologies such as encryption ''to build the legal standards of copyright directly into'' copyrighted works (Gillespie, 2007, p. 7). For instance, the encryption on motion picture DVDs is a DRM system that keeps most users from ''ripping'' their DVD collection—copying the data to their computers for later replay. In contrast, music CDs are unencrypted, so many computer users rip all their CDs. Thanks to a few clever users, there are several applications to rip DVDs. The 1998 Digital Millennium Copyright Act, or DMCA, includes anticircumvention provisions (§§1201−1204) that render such software illegal, but despite this law, DVD rippers are widely available online.

From 2003 to 2006, two DRM-related policy proposals drew serious attention. First, the SC coalition wanted to limit viewers' ability to record and share broadcast digital television (DTV) signals by mandating that DTV receivers encrypt any recorded signals using a DRM system called the ''broadcast flag'' (Gillespie, 2007, pp. 193−222). The FCC mandated broadcast flag encryption for DTV tuners effective July 1, 2005, but library groups and NGOs successfully sued to void the ruling. (*American Library Association v. FCC*, 2005). The court held that the FCC had exceeded its congressional authority. The battle thus moved to Congress, where the SFU coalition helped stop the bill's passage (Herman, 2009, pp. 171−180).

Second, the SFU coalition proposed reforms reducing the reach of the DMCA's anticircumvention provisions. The law prohibits most circumvention, even if the intended use is noninfringing, meaning that it would otherwise be legal under copyright law. Rep. Rick Boucher (D-VA) and congressional allies proposed allowing circumvention for noninfringing purposes—such as teaching, research, and personal use—and allowing some development and sale of circumvention devices (Herman, 2009, pp. 167–168). These proposals garnered several hearings and congressional support—another sign of the SFU coalition's increased political capital. While these proposals were rebuffed, the SFU coalition's heavy use of internet advocacy at least gave them a fighting chance (Herman, 2009).

Policy Advocacy, Media Strategy, and New Media

There are good reasons to suspect that, at least on some policy issues, online communication will differ substantially from that issue's representation offline. Before looking for such differences in the copyright debate, I examine the literature on collective action, the policy process, and the potential changes introduced by new media technologies.

Collective Action: Mobilization and Free Riding

If one hopes to have any real policy influence, the first step is to identify and mobilize allies. Yet most potential activists will stay on the sidelines. Most policy outcomes will affect people whether or not they fought for the outcome, and for a typical citizen, the odds that her efforts will be uniquely responsible for a given policy outcome are slim indeed. Thus, the economically rational choice is usually to free ride. This is the problem of collective action, and while it is a key hurdle for all policy activists, it is a higher hurdle for some than others; the fewer actors one needs to mobilize, the more likely one is to succeed (Olson, 1965; Ostrom, 1999). Small groups with concentrated interests are relatively easy to identify mobilize; for instance, the major executives in a given industry generally know each other. In contrast, mobilizing diffuse groups is far more difficult. Five people or institutions who each have a million dollars at stake will be easy to identify and mobilize, while a million people who each have five dollars at stake will be much harder to identify and mobilize. This is why concentrated groups tend to be better at securing policy victories than do diffuse groups—a phenomenon that is so pervasive in US politics, and one that so magnifies economic privilege, that Hacker and Pierson (2010) identify it as the root cause of the country's gravest political problems.

Policy Subsystems, Attention and Outcomes

For most of the time on most issues, just a few people are actively communicating with policymakers; this small group is the issue's policy subsystem (Sabatier, 2007). Humans have a bottleneck of attention (Jones & Baumgartner, 2005), so large institutions such as Congress and newspapers delegate issues to subdivisions such as committees and section editors. Occasionally, an issue will burst out of these constraints and into broader attention—the front page, the House floor. When this happens, we tend "to overreact with 'alarmed discovery'" at the sudden recognition of "new or previously overlooked information" (Jones & Baumgartner, 2005, pp. 52, 55), offering advocates a brief opportunity to reframe the issue and advance substantial changes. As long as an issue stays within the policy subsystem, major change is unlikely, but an upswing in outsider attention makes such change more likely. This creates a cycle of punctuated equilibriums—long periods of relative stability interrupted by brief windows of major change (Jones & Baumgartner, 2005, pp. 17–20). If the coalition seeking change is also relatively poorer and more diffuse, they have strong incentives to seek attention, leading to substantial media outreach (Kingdon, 2002, p. 61). If it works, they might win major policy changes. Likewise,

well-resourced supporters of the status quo rarely seek destabilizing increases in media attention. Even when such upswings occur, the journalistic norm of objectivity (Kaplan, 2006) tempers any pro-change messages, mitigating the impact of media victories for change-seeking coalitions.

New Media and Changes in Policy Advocacy

The internet reshapes policy advocacy in several ways, most of which mitigate the problem of collective action. First, internet communication is cheaper. Everybody gains more absolute communication power, but this is a much greater relative gain for the poorest groups. The gains are real but limited; it leads to an inflation in the number of messages directed at policymakers and the general public, reducing the value of each (Bimber, 2003, p. 107). A less-recognized but perhaps equally important gain is the increased affordability of intra-coalition communication such as information sharing, message development, and agenda setting. This is the backbone for more public advocacy, and it may be even more important than the more visible changes in public strategies (Marres, 2006).

The internet also makes it easier to identify and mobilize issue publics. Groups can email potential activists; create websites, blogs, and social media pages; and even advertise online for relatively small sums. With every conceivable media niche finding a home online, sympathetic news sources and audiences are easy to find. Occasionally, online communication goes viral, potentially bringing still other activists into the fold. These technologies also break down the barriers between private and public communication (Bimber et al., 2005), making it much easier for citizens to communicate a coalition's message to others, recruit new members, participate in the policymaking process, and thus effectively join a coalition.

Finally, the internet helps coalitions seeking to reshape the perception of an issue and heighten its visibility for the broader public. The internet has become important part of how more traditional news sources decide what counts as newsworthy (Wallsten, 2007). Additionally, news outlets are increasingly relying on external sources such as email and the web for identifying hot stories and doing background research—especially as newsroom budgets shrink (Davis, 2002). All of these factors have combined to enable policy victories by under-funded coalitions on issues ranging from banking privacy (Bimber, 2003) to broadcast ownership rules (McChesney, 2004) and broadcast indecency (Thierer, 2005). In each case, an under-funded, diffuse group of citizens and NGOs scored a victory against a concentrated, well-funded industry group.

Coalitions in the Copyright Debate and Internet Strategies

For policy advocates, the decision on whether to devote substantial personnel resources to online communication depends on several factors. For the reasons noted above, two reasons justify online mobilization: to fight against an entrenched status quo, and to mobilize a relatively large number of potential coalition members. There is also a third reason that applies to a subset of debates, most especially including technology policy: if one's actual or potential coalition population is more densely populated by internet enthusiasts than one's opponents. On all three counts, the SFU coalition has every reason to seek very heavy online participation, while the SC coalition does not.

First, on the degree of change sought, copyright law in general and DRM regulations specifically are much better reflections of the wishes of the SC coalition. The DMCA stands as a cherished SC coalition victory, and opposition has galvanized the SFU coalition (Herman, 2009; Herman & Gandy, 2006). To reform the DMCA would be a major change in DRM policy, and it would have required the kind of major mobilization for which lots of internet-generated attention would be helpful. In contrast, while the broadcast flag proposal was indeed an important possible change in copyright (Gillespie, 2007), it would have represented a comparatively minor reform.

Second, the SC coalition is far more concentrated. This is the simplest explanation for the century-long expansion of copyright to the benefit of copyright holders (Landes & Posner, 2003; Litman, 2000). In principle, stronger copyright means higher prices and a decreased availability of information; these benefits accrue mostly to a handful of multinational media conglomerates, while the cost is spread thinly across the rest of the populace and other industries. Samuelson (2004) concludes, "this mix of concentrated benefits and distributed costs is likely to yield the best laws money can buy" (p. 9). The much more diffuse SFU coalition therefore must seek broader public attention and sympathy.

Finally, the SFU coalition is more densely populated by internet enthusiasts. For instance, the EFF's Board of Directors has long been an all-star roster of world-famous computer engineers, internet visionaries, and cyberlaw experts. The group even sponsors hacking contests and sets up booths at hacker conventions. While not every member of the coalition is a computer expert, other allied sectors such as technology law scholars and librarians also tend to be among the earliest and most enthusiastic adopters of new internet tools. In contrast, entertainment industry advocates do not necessarily see the internet as their natural place to communicate—especially when so many of them see the internet as a threat to their livelihoods (Boyle, 2008). The SC coalition also includes major portions of the software industry, but this just slightly tempers the SFU coalition's substantial advantage in technology savvy—and their even stronger advantage in moral credence among the technorati.

Research Questions

This study first asks which coalition's message will be communicated most frequently in Congress, in newspapers, and online. Based on prior research on DRM advocacy (Herman & Gandy, 2006), personal experience, and informal observation, this study began with little doubt as to the SFU coalition's much greater participation in the online debate, as well as strong expectations of a comparatively balanced representation in congressional hearings and newspapers. This fits with each coalition's political situation and culture. In other words, I use new methodological strategies to confirm and measure two pre-existing informal observations: that the ratio of SFU arguments to SC arguments online is greater than the ratio in congressional hearings, as well as greater than the ratio in newspapers.

I also explore one explanatory variable, the sectors that are represented—media industry, technology industry, NGOs, scholars, and so on. I ask: How does sector representation differ by medium? Informal observation also left me confident about the outcomes for certain sectors. The media sector anchors the SC coalition, which also includes most interested congresspersons and other policymakers such as the Register of Copyrights (Litman, 2000). The technology sector is divided between the coalitions, and most participating NGOs, librarians, and scholars support SFU (Herman & Gandy, 2006). I had already observed that the media sector enjoys a relatively larger share of the appearances in Congress and newspapers than online, as do congresspersons; meanwhile, NGOs and scholars appear relatively more often online than in hearings and newspapers. I had no clear expectations for participation across media for appointed officials, the technology sector, and librarians.

Methodology

This study's core method is a content analysis (Krippendorff, 2004) of the policy advocacy documents related to the broadcast flag and DMCA reform debates from 2003 to 2006. Specifically, I looked at: testimony and written submissions in relevant congressional hearings, articles in *The New York Times* and *Washington Post*, and dozens of websites at the heart of the online copyright debate. After a second coder confirmed high intercoder reliability, a primary coder did all of the content analysis. Reliability for each variable meets or exceeds $\alpha = .80$ with samples that either meet suggested sample

sizes (Krippendorff, 2004, p. 240) or are a census of relevant documents. Statistical sampling was used only for intercoder reliability checks. All α scores reported are intercoder reliability scores. Results are obtained by coding a census of the available, relevant documents; since I use a census rather than random sampling, I do not report statistical significance—which would be misleading—but instead report effect sizes.

Identifying Relevant Congressional and Newspaper Documents

Congressional hearings and national newspapers, identified here as "offline" sources because these media predate and do not require the internet, are nonetheless both carefully archived and made available in online research databases. I searched the LexisNexis Congressional database for descriptions of all non-appropriations hearings from 2003 to 2006 that dealt with copyright law; of 50 such hearings, coders identified 7 as relevant to the DRM policy debate ($\alpha = 1.0$ on all 50 hearing summaries). Each speech or written submission was then also coded for relevance in the broadcast flag debate ($\alpha = .86$ on 70 documents coded by two coders, or 70 "pairs" of codes) and DMCA reform debate ($\alpha = .80$, 70 pairs). Of 233 total documents, 87 were relevant exclusively to the broadcast flag debate, 67 were relevant to DMCA reform, and 9 documents were relevant to both, for a total of 163.

The LexisNexis News database also provided the relevant print news stories from 2003-2006. This study focuses on *The New York Times* and *The Washington Post*, which exert major influence on national policy (Kingdon, 2002, p. 59; McCombs, 2004, p. 113). Out of 1431 articles with "copyright" in the headline, lead paragraph, or search terms, only 24 were relevant to the broadcast flag or DMCA reform debates. For the broadcast flag, the *Times* had just six relevant articles and the *Post* had four $\alpha = .96$, 70 pairs. Just 14 articles in the *Times* (8) and *Post* (6) ($\alpha = .93$, 70 pairs) discussed DMCA reform.

Identifying Relevant Online Documents

Few websites are carefully archived in library databases. Fortunately for researchers, sites cluster in groups, and members of these clusters link to each other. Thus, hyperlinks can be used to identify clusters of related sites and each of those sites' relative online authority. This is the core insight that made Google a success, and it enables researchers to say a great deal about online content (Barabási, 2003; Hindman, 2009; Rogers, 2004). Within each topical cluster is an even smaller cluster of authoritative sites, shown by the group's collective linking behavior to be more authoritative in much the same way that regular scholarly citations establish high scholarly authority (Barabási, 2003). These core websites dominate the issue space (Benkler, 2006; Hindman, 2009). This study uses a two-step method. The first step is to identify websites deemed to be meaningful participants in the relevant online community—here, the copyright policy subsystem. The second step is to search each site for relevant documents. The result is an imperfect but effective census of important sites and their relevant documents.

Identifying authoritative websites begins with the Issue Crawler (Govcom.org Foundation, n.d.). Richard Rogers (2004) developed this tool, and this study builds on the methodologies of Rogers and others (Bruns, 2007; Farrall & Delli Carpini, 2004; Xenos & Bennett, 2007). To use the crawler, one feeds it a "seed" list of related websites. The crawler then visits the seed websites, searching for hyperlinks to still other websites. Any new website that has incoming links by at least two of the seed websites is added to the list, and the crawler repeats the process for a set number of rounds; the default, as used here and as recommended for issue analysis, is two rounds, with a maximum results list of 100 sites. The crawler produces a color map of interlinked websites, and it also reports the raw number of incoming links for each site. This study uses the quantitative data, though an example map of the online copyright debate and detailed accompanying explanation are available elsewhere (Herman, 2009, pp. 253-259).

Table 1 Top Ten Web Crawl Results by Mean Rank

Rank	Organization/Individual	URL	Mean Rank
1	Creative Commons	creativecommons.org	1.77
2	Electronic Frontier Foundation	eff.org	2.38
3	Free Software Foundation	fsf.org	3.85
4	Lawrence Lessig	lessig.org	6.69
5	Center for Democracy & Technology	cdt.org	14.46
6	Public Knowledge	publicknowledge.org	16.00
7	Thomas, Library of Congress	thomas.loc.gov	18.54
8	Stanford Center for Internet and Society	cyberlaw.stanford.edu	18.77
9	Consumer Project on Technology	cptech.org	21.31
10	Berkman Center for Internet & Society	cyber.law.harvard.edu	22.69

For starting websites, this study's crawls began from five organizations' sites: the US Copyright Office, the Recording Industry Association of America (RIAA), the Consumer Electronics Association (CEA), Public Knowledge (PK), and the Progress and Freedom Foundation (PFF). This list features a balance of copyright beliefs and a diversity of organizational structure. Along with the most directly relevant government agency, it has two groups each in the SC (RIAA and PFF) and SFU coalitions (CEA and PK). Two are industry groups (RIAA and CEA) and two NGOs (PK and PFF). I checked the validity of the final network results by testing them against other lists of seed websites, demonstrating a very slim chance that major sites were left out of the final results (Herman, 2009, pp. 110–121). I ran 13 crawls, one per month from October 2006 to October 2007. Of 210 root domains (e.g., publicknowledge.org) appearing at least once, 78 appeared in a majority of crawls (at least 7); this study includes these 78 sites. Table 1 lists the top ten, sorted by mean rank across all 13 crawls. (The most-linked site for a given crawl is ranked #1; for any months a site is not included, I assigned it the rank of #99.) Nine of these sites are at the heart of the SFU coalition. The only exception is the Library of Congress's Thomas database of federal legislation.

Identifying documents by site—that is, retrieving relevant individual web pages or other documents (e.g., PDF files) from each web domain—is the next step in identifying a group's stance on an issue. For these purposes, each item found at a unique web address is treated as an individual document. Google is used to search each web domain. For instance, in order to identify web pages related to the broadcast flag debate, as found on the Electronic Frontier Foundation website, I used the following search term:

> copyright (audio OR video OR radio OR broadcast) flag site:eff.org

On November 7, 2007, Google identified this search as retrieving "about 835" documents. The results for the same search on the Public Knowledge website returned about 2,350 documents. With such voluminous results for even a targeted search such as this—and on just two of 78 websites to be searched—it is impossible to hand-code all documents. This study thus uses a method for estimating the number of search results on each given site that have any real likelihood of being useful. As I detail in full elsewhere (Herman, 2009, pp. 121–140), I concluded that relevant documents are highly unlikely after about the first 100 results, and that in any case each site was unlikely to have more than about 40 relevant documents. These estimates are based on search terms tested on the only high-volume website with much representation by both coalitions, House.gov; after running tests of multiple search terms,

the chosen terms are estimated to retrieve over 80% of relevant documents. Out of 78 included websites, 52 had at least 1 relevant document; since several sites had very many relevant documents, there were 511 relevant documents authored from 2003 to 2006. (Several were outside the relevant timeframe; 179 were before 2003, 83 were from 2007, when documents were retrieved, and 145 had no clear date.) Each of these was then coded for all variables.

Variables Coded

In addition to coding for year of authorship $\alpha = 1.00, 162$ pairs, each relevant document was coded for its copyright viewpoint, or the degree to which it supports either SC or SFU. Each fits in one of three rhetorical categories: clearly supporting the SC position (given the number 1) or the SFU position (3), or neutral, mixed, or unclear (2) ($\alpha = .95$, 120 pairs). For neutral documents, each paragraph was coded as relevant to either the DMCA reform debate $\alpha = .89$ or the broadcast flag debate $\alpha = .92$, and relevant paragraphs were coded for copyright viewpoint using the same three categories: strong copyright (1), neutral/mixed (2), or strong fair use (3) ($\alpha = .90$, 139 pairs). I then took the mean copyright viewpoint of all coded paragraphs for each neutral document to give a more precise estimate of each document's leaning toward one side or the other. All documents could then be placed on a scale from one to three, with one representing the SC position and three representing the SFU position. Finally, all documents were coded for the sector(s) represented, such as media, technology, or NGOs $\alpha = .86$, 179 pairs. Sectors were coded nonexclusively, as several documents represented the voices of more than one sector.

Findings

The internet and offline media differed substantially in their collective opinion of DRM regulation. They also differed in terms of the voices represented.

Comparing Copyright Viewpoint

Newspapers and hearings during this period presented fairly balanced messages on DRM regulation. Table 2 lays out the raw counts. Of 163 congressional documents, 42 percent supported the SC position, 46 percent the SFU position, and 12 percent a mixed or neutral position. Consistent with the journalistic norm of objectivity, newspapers were generally neutral (71% of articles), though of the seven that took a position, six (25% of the total) supported SFU. In sharp contrast, the web featured nearly all SFU documents. Of 511 web documents, 82 percent took the SFU position, leaving just 10 percent neutral documents and 8 percent SC.

The web's strong SFU bias comes from two factors: there are more SFU websites, and that coalition posts more relevant documents per site. Of the 52 websites that included at least one relevant document,

Table 2 Rhetorical Categories by Medium, 2003 to 2006

Rhetorical Categories	Number of Documents by Medium			
	Congress	Newspaper	Web	Total
Strong Copyright	69	1	41	111
Neutral/Mixed	19	17	53	89
Strong Fair Use	75	6	417	498
Total	163	24	511	698
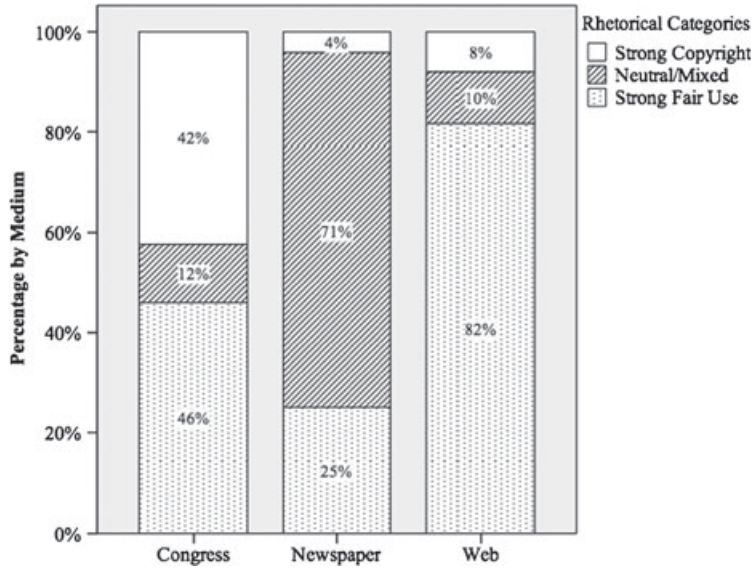
Figure 1 Rhetorical Categories by Medium, 2003 to 2006

41 leaned toward SFU and just 11 toward SC. Of these 52 websites, half (26) had exclusively SFU documents. On a scale from 1.0 (strong copyright) to 3.0 (strong fair use), ten sites had a mean document score between 2.70 and 2.99—still squarely in the SFU camp. Of the eleven SC sites, six posted exclusively SC documents.

In addition to having more allied websites, the SFU coalition also posted many more relevant documents per site. The 41 SFU sites posted an average of 10.4 topical documents, while the 11 SC sites averaged just 3.7. Core SFU groups were prolific online; the EFF (81 documents), Public Knowledge (74), the American Library Association (53), and researchers at Princeton (54), Harvard (45), and Stanford (27, including 10 at Lawrence Lessig's site) posted many relevant documents. In contrast, core SC groups were quiet. The Motion Picture Association of America (MPAA) posted 14 relevant documents; the RIAA posted just one. The Progress and Freedom Foundation (PFF), a recently-disbanded SC-allied NGO, posted just 18.

These three media presented highly divergent representations of the copyright debate. In terms of categories represented ($\chi^2 = 189, df = 4$), the difference represents a medium to large effect size (Cramer's $V = .368$). A result like this could have been due to the high proportion of neutral documents in newspapers, but the difference stays fairly sharp even after removing neutral documents ($\chi^2 = 112, df = 2$), and the effect size even increases (Cramer's $V = .428$). See Figure 1, which shows the proportion of documents that fall into each rhetorical category within each medium. The difference between online and congressional documents is particularly stark. Among side-taking documents, a given web document is 6.22 times more likely to support SFU than is a given congressional document. This converts to a d-like measure of effect size (Chinn, 2000) of 1.01, showing an exceptionally large difference (Cohen, 1988).

Comparing media based on mean copyright viewpoint shows very similar results. The distributions are highly non-normal (most hearing and web documents have a score of 1.0 or 3.0), but including this linear measure as part of the total analysis allows for sensible comparison with mostly-neutral newspaper articles. Where 1.0 is the SC viewpoint and 3.0 the SFU viewpoint, congressional documents averaged

a nearly-neutral 2.05 ($SD = .95$). In contrast, newspaper articles averaged 2.28 ($SD = .52$), and web documents averaged a highly-slanted 2.75 ($SD = .59$). Newspapers and the web were substantially different. Assuming equal variances ($F = .02, p = .883$), t equals 3.84 ($df = 533$), a difference with an atypically large effect size ($d = .85$) (Cohen, 1988), meaning a profound difference in how these two media represent the debate. Web and congressional documents were even farther apart. Noting the unequal variances ($F = 202.11, p < .001$), t equals 11.31 ($df = 672$), again with an unusually large effect size ($d = .89$). These differences are far too large to have resulted from the imperfect retrieval of online documents. The search process was estimated to retrieve over 82 percent of relevant documents. Even assuming 82 percent retrieval for SC documents and 100 percent for SFU—an unrealistically conservative estimate—these ratios change little. Dividing 41 SC web documents by .82 retrieval gives the still-modest total of 50; the online ratio of SFU to SC documents would still be 417/50, or 8.3 to 1, and the mean viewpoint score would be a very SFU-biased 2.71.

While the slight SFU bias of newspapers and strong bias of web documents both confirmed expectations, the near neutrality of congressional hearings was a surprising change from earlier debates. For hearings on the Audio Home Recording Act (1992) from 1989 to 1992, the mean score was 1.50 ($SD = .84$); for the DMCA debate from 1995 to 1998, it was 1.85 ($SD = .98$) (Herman, 2009, pp. 192–196)—substantial and modest SC biases, respectively. This is a notable SFU gain over time; comparing 1989-1992 versus 2003-2006, d equals .61, a medium to large effect size. Yet not all of this SFU gain may be permanent; from 2004 to 2006, Republican Joe Barton, a provisional SFU ally, chaired the House Committee on Energy and Commerce. This shows a remarkable shift in the politics of copyright, but the SFU slant in Barton's witness lists gave the coalition an even larger, temporary gain.

Comparing Sector Representation
Not only do the three media differ sharply in copyright viewpoint, they also vary greatly in the types of actors that are represented. Among SC groups—especially the media sector and government officials—each sector's share of appearances in Congress and newspaper articles is larger than their online share. Likewise, among groups that support SFU—especially NGOs and scholars—their online share is generally higher than their shares in either newspapers or hearings. Sectors are coded nonexclusively, as many documents represent more than one sector. In particular, most newspaper articles quote members from more than one sector; the 24 articles have quotes from 56 sectors, or 2.33 sectors per article. Documents from hearings (175 sectors across 163 documents, or 1.07 per) and the web (595 sectors, 511 documents, 1.16 per) usually represent one sector. I use these ratios to normalize each sector's representation by medium, producing an adjusted share by medium. For instance, the media industry appears in 14 of 24 relevant newspaper articles, or 58 percent of articles. Divided by 2.33 sectors per article, the media sector's adjusted share in newspapers is 25 percent. These measures of adjusted share allow for useful comparisons across media. See Table 3 for sectors' shares by medium.

The media sector had about a quarter of the share of congressional documents and newspaper articles, but just six percent of web documents. Likewise, congresspersons had nearly a third of congressional documents and some newspaper appearances, but they had just two percent of web documents. In contrast, the sectors at the core of the SFU coalition had much higher shares online than offline. NGOs had respectable shares in Congress (12%) and newspapers (18%), but these shares are small compared to their 31 percent share online. Scholars had small shares of hearing documents (5%) and appearances in newspaper articles (7%) but a full third of web documents. For these four sectors, the difference between online and offline shares provides strong confirmation of pre-existing informal observations.

The remaining sectors of interest were appointed government officials, librarians, and the technology sector. For appointed officials, the overall participation was expected to be low and was low in hearings

Table 3 Sector Representation, Proportional Share, by Medium

Sector	Proportional Share by Medium			
	Congress	Newspapers	Web	Avg./Medium
Media	21.7	25.0	5.5	17.4
Congresspersons	28.6	8.9	2.4	13.3
NGOs	11.5	17.9	31.1	20.1
Scholars	5.1	7.2	34.6	15.6
Appointed Officials	5.0	10.7	3.4	6.4
Librarians	7.4	1.8	7.7	5.7
Technology	19.5	19.6	11.6	16.9
All others	1.2	8.9	3.6	4.6

and online, though newspaper appearances (6 articles, 11% share) were a bit more common than expected. Librarians' offline participation was also low: seven percent of hearings, two percent in newspapers (i.e., 1 article), and seven percent online. The American Library Association is an important voice in the online debate; they hosted 53 relevant documents (8% share), all supporting SFU. Yet unlike NGOs and scholarly groups, with many sites each, the ALA was librarians' only voice online representing their views on DRM policy.

Along with NGOs, the technology sector was one of just two with double-digit shares across hearings (20%), newspapers (20%), and the web (12%). This inter-media visibility resulted mostly from the sector's diversity; it includes corporations that sell hardware, software, and services (e.g., IBM, Microsoft, Google) and their trade associations. These industry voices appeared in hearings and articles with frequency rivaling the content industries. Technology industry groups also said a bit more online than media groups; the Consumer Electronics Association posted 28 relevant documents, and the Home Recording Rights Coalition added 10.

The technology sector also includes many non-corporate actors who contribute to the online debate exclusively. For instance, the nonprofit Free Software Foundation provides the legal and logistical backbone for free software projects such as GNU/Linux; their site (10 documents) was the third most-linked site in the community. Computing Professionals for Social Responsibility (6 documents) represents individuals in the technology sector. Finally, the Association for Computing Machinery, or ACM (44 documents), functions like an academic association and many college faculty are members, but so are many private sector computer professionals; thus, it also counts as a technology group. With the exception of the ACM (mean score 2.85, nearly 100% SFU), all of these sites' documents took the SFU position. While corporations backed most of the sector's participation in newspapers and hearings, other groups did most of the online advocacy. The only SC-allied technology trade group in the set, the Business Software Alliance, posted zero relevant documents online, but they appeared in hearings and articles. Thus, the sector had high visibility across all three media, but not because many individual actors appeared in each medium. Rather, corporate voices sought more official channels, and nonprofit and scholarly voices took to the web.

Discussion

The copyright debate looked very different depending on the medium through which it was viewed. Policymakers got a fairly two-sided view of the matter. Newspaper coverage leaned modestly toward

fair use but had little coverage, preventing the SFU coalition from reaching the critical mass of public attention that might help unseat the current policy order. In contrast, the web debate was very one-sided. In particular, NGOs and scholars argued loudly against DRM regulation, providing the authoritative heart of the coalition's web cluster.

The one-sidedness of the web debate resulted from sharp differences in motivation and culture. Congresspersons are hardly the most tech-savvy group, and they already have access to each other and the news media, so they rarely discuss copyright online. Likewise, media companies have historically fared very well in Congress and can easily command press attention, so they have little more to gain online. While copyright holders are still fighting online file sharing, this legal and public relations war mostly assumes current statutory law rather than challenging it. Additionally, while media companies are reasonably internet savvy, their shift to online distribution has been more begrudging than enthusiastic (Boyle, 2008).

In contrast, the SFU coalition has incentives and culture that push them toward maximum online engagement. Coalition members want to maximize sympathetic publicity and the visibility of specific policy debates, because leaving the current policy order in place leaves little chance to reduce the reach of copyright law. As a resource-poor coalition, they have the most to benefit by decreasing communication costs. They are also attempting to use the web to reach ordinary citizens, and with little SC presence online, the SFU coalition are able to carve out the medium as their own. Further, the SFU message appeals to the technologically savvy. The technology professionals, scholars, NGOs, librarians, and computer enthusiasts that drive the calls to limit copyright may be the most technologically adept multi-sector political coalition in history. For reasons of both political motivation and culture, then, it is natural for the SFU coalition to have a much heavier online presence. The real surprises of this study stem not from the differences between media, but from the remarkable sizes of those differences, as well as the SFU coalition's surprising parity in congressional hearings and modest advantage in newspaper coverage.

Conclusion

While these findings on copyright are unique, they reflect an ongoing shift in advocacy across a range of policy issues. The strong fair use coalition's strategies suggest online political mobilization is worth a great deal of energy, at least for some actors. Many of the groups seeking to mobilize large numbers of activists for little money are forming into loosely affiliated networks who largely communicate online (Bennett et al., 2008; Bimber et al., 2005). The internet is ''a core component of modern political campaigns'' (Hindman, 2009, p. 130), and while the research into online issue advocacy is still thin, these results augment the informal observation that the web is a core component for many advocacy coalitions' campaigns. It has long been standard for a disadvantaged policy coalition to go public, reaching out to the press in the hopes that publicity can upset an established political order (Kingdon, 2002). This study highlights the limits of that strategy; even favorable press coverage may be too infrequent to educate readers on the topic, let alone motivate them to action. Online strategies help these coalitions to avoid dependence on penetrating scarce column inches.

While this is just one policy arena—one test with which to assess the effects of online advocacy—the recent history of the DRM policy debate suggests the SFU coalition's decision to go online may have made a real difference. Through the 20th Century, the SC coalition controlled the agenda with relative ease. The failure of the broadcast flag proposal and congressional support for DMCA reform highlight the SFU coalition's ascendance from virtual nonexistence to modest success in under 10 years (Herman, 2009). The coalition's members clearly believe in the value of online communication, whether primarily

as a tool for intra-coalition or public communication. A follow-up study under way involves semi-structured interviews with policy advocates to assess how they use the internet and what they think of its impact.

These results are also just the first step in a larger investigation of strategic uses of the internet across policy issues. The SFU coalition and the members of the public most likely to join them are especially skilled with and enthusiastic about the internet; in other policy debates, the differences between online and offline communication may be smaller or even nonexistent. Other studies suggest online mobilization of communities that are not inherently populated with technophiles, ranging from banking policy (Bimber, 2003) to the 2003 invasion of Iraq (Bennett et al., 2008). This study adds copyright to the list, but this list is still far too short. A much greater wealth of topics could help tease out whether and how the subject of a policy debate shapes its participants' ability and inclination to go online.

Further research is also warranted to tease out the effects of different policy dynamics. This debate features a common but not universal scene: an entrenched industry coalition, defending or seeking minor advances on the basic tenets of the status quo; and a single, mostly unified opposition coalition, built mostly by scholars and nonprofits, with comparatively little industry backing. Many other policy debates feature this dynamic—for instance, many debates over environmental policy—but many do not. Some feature debates primarily between industry coalitions, and some are primarily between NGOs. Some feature more than two coalitions. Further research on diverse policy debates can begin to disentangle all of these variables, building a richer theory about what types of political dynamics tend to lead a policy coalition to go online in full force or to stay relatively quiet online. As the research begins to include more policy debates, scholars can also begin to assess the effects that online communication has on policy outcomes.

More broadly, this research could become part of an expanded view of the study of political communication and policymaking in the digital age. The study of political communication in general and internet politics in particular is largely focused on the most visible communicators—political candidates, mainstream media companies, major partisan blogs, and so on. Yet the visibility of an act of political communication is not the same as that act's importance, and policy advocacy is often relatively obscure in visibility but nonetheless quite important. Similarly, the explosion of online advocacy may force scholars who study the policymaking process to attend more seriously to the essentially communicative nature of that process. While many of these scholars have long acknowledged the importance of ideas and even attention and the media, they generally have not seriously addressed Waples' (1942) question, "Who communicates what to whom by what medium, under what conditions, and with what effects?" (p. 907). At least under some conditions, internet communication seems to be helping to shape some policy outcomes, but we are still only beginning to be able to assess how online advocacy is different, let alone its policy effects. A fuller assessment is a worthwhile project for scholars of both political communication and the policymaking process.

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