Understanding Copyright Law in Online Creative Communities

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ABSTRACT
Copyright law is increasingly relevant to everyday interactions online, from social media status updates to artists showcasing their work. This is especially true in creative spaces where rules about reuse and remix are notoriously gray. Based on a content analysis of public forum postings in eight different online communities featuring different media types (music, video, art, and writing), we found that copyright is a frequent topic of conversation and that much of this discourse stems from problems that copyright causes for creative activities. We identify the major types of problems encountered, including chilling effects that negatively impact technology use. We find that many challenges can be explained by lack of knowledge about legal or policy rules, including breakdowns in user expectations for the sites they use. We argue that lack of clarity is a pervasive usability problem that should be considered more carefully in the design of user-generated content platforms.

Author Keywords
Copyright; Creativity; Fanworks; Intellectual property; Law; Online communities; Policy; Remix; User-generated content

ACM Classification Keywords
K.4.1 [Computers and Society]: Public Policy Issues --- Intellectual property rights

INTRODUCTION
Copyright law, once primarily the domain of publishers and lawyers, is now relevant to anyone with an Internet connection and a “share” button. Whereas four decades ago when the Copyright Act was passed infringement typically involved printing presses or Xerox machines, today unauthorized copying is an everyday activity for many people—to the point where, as Lawrence Lessig famously put it, perhaps we are raising an entire generation to think that they are criminals [25]. Likewise, with user-generated content taking over the web, protecting a copyright is something that concerns a growing number of people who are showcasing their creative work online. Multiple stakeholders with often competing interests make this a complicated design space. These stakeholders include not only copyright holders and content creators, but also technology designers.

However, just because copyright is relevant to more people does not mean that the law surrounding it is any less complex. Indeed, it is even more so, since technological advances tend to exacerbate existing confusions in the law as new policies struggle to keep up with developing technology and practices. Therefore it is unsurprising that misunderstandings, misconceptions, and confusion about the law are commonplace among many different types of content creators and consumers [1,13,17,19,23,27].

This potential confusion is particularly striking for legal gray areas such as remix. Along with distribution and sharing, technological advances have made content reuse an easy task for the ordinary Internet user—from remix videos created with software that now comes on every computer to simple image macros generated by any number of websites. Whereas the average person may know enough about copyright to recognize that sharing a downloaded song is not acceptable, the question of whether they are permitted to use part of a song in a remix video is more difficult to answer because the law does allow for some uses of copyrighted content. Otherwise, Saturday Night Live could not parody films and journalists could not quote from books in book reviews. This same copyright exception potentially covers creative works such as music sampling, remix videos, and fan fiction.

In the United States, the legal doctrine that governs when it is permissible to appropriate copyrighted material is called fair use,¹ and even before widespread use of the Internet, ¹ Fair use in U.S. law (though there are similar concepts for other countries) is a codified exception to copyright law. It covers, for example, parody and news reporting. It can also allow for creative re-uses such as remix. Though a judge determines whether a situation is fair use on a case-by-case basis, the Copyright Act of 1976 provides four factors to be weighed in making the determination:

(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;

(2) the nature of the copyrighted work;
the Supreme Court in *Campbell v. Acuff-Rose* (1992) referred to it as the “most troublesome” part of all of copyright law. Prior work has shown that for online creators who work with appropriated material, there is indeed confusion about relevant law and that community norms sometimes fill in these gaps in understanding [13].

An additional source of confusion for amateur content creators showcasing their work online can be their own rights in their work. Whereas in most countries copyright vests at the time of creation and therefore automatically exists as soon as someone creates something original, it is a common misconception that making something available on the web puts it into the public domain, or that registration is required for having a copyright in a work. Additionally, Terms of Service governing copyright terms for the websites used for sharing are often long and difficult to understand [12]. Therefore, creators are sometimes unsure about their own rights, including how to deal with plagiarism and—going back to fair use—how other people can use parts of their work.

Despite the lack of bright line rules for some of these copyright concepts, many Internet users make decisions every day about what is permissible and what is not. In doing so, they must negotiate multiple sources of rules, including the letter of the law, website policies, community norms, and ethical standards. It is therefore unsurprising that copyright law is a frequent topic of conversation in the online communities where content creators gather.

In this study, we use these conversations as a starting point to understand the challenges that these creators face in an uncertain legal environment. By analyzing public forum postings in online creative communities, we discern how the law is understood (and—most importantly—not understood), discussed, and engaged with, and its effects on creative activities and online interaction. Focusing primarily on U.S. law, we identify five types of problems related to copyright encountered by creators in these communities, and discuss how community policies and incomplete information contribute to these problems. We also discuss how these problems impact interaction and technology use, which could have design implications for technology and online community designers.

### RELATED WORKS

CSCW research often emphasizes the importance of designing with the entire socio-technical system in mind. With respect to online content creation, we know that creativity does not exist in a vacuum, but rather is influenced by context such as the connection between the artist and broader cultural and technological factors [7]. In previous studies of remixers, there has been a necessary backdrop of copyright in discussions of issues such as distribution, sharing, or commercialization [6,18].

In other studies of amateur content creation, copyright has been a more central part of the discussion. Two different studies examining attitudes about content reuse concluded that behavior does not track completely to either the law or to website policy and guidelines, but relies heavily on social norms as well [13,27]. In communities of video mash-up artists [9], fanworks creators [13], or even knitters [19], behavior and attitudes are often guided by intuitions and norms about appropriation. For example, conflicts that have erupted over the years in fan communities reveal a number of strongly entrenched social norms related to copyright: norms about plagiarism, attribution, what constitutes commercialization, and “filing the serial numbers” off fan fiction (i.e., changing the names of characters and then publishing it) [21]. Remixers such as fan fiction writers represent a group struggling to understand and locate the law within these cultural norms [29]. In some communities, these norms and ethical standards have been formalized into codes of best practices [2].

Part of the reason that norms can be particularly complex in these communities is that interpretations of relevant laws can vary substantially. Not only in copyright, but for realms such as privacy as well, the law is often context-dependent, which can be frustrating for designers and researchers [20]. Fair use in particular is decided on a case-by-case basis. Designed purposefully as a heuristic rather than a bright line rule, this flexibility is desirable in a legal context (particularly since the law can be slow to catch up to technology), but essentially impossible to model computationally [2,11]. Even though years of case precedent have clarified many areas of fair use, amateur creative content has been less frequently litigated. Therefore, some communities’ uses cut through both the clear and unclear areas of the law.

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(3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and

(4) the effect of the use upon the potential market for or value of the copyrighted work (17 U.S.C. § 107)

2 Creative works in the public domain have no copyright and therefore are freely available for anyone to use. There are typically three ways this can happen: (1) the copyright has expired (e.g., the works of Jane Austen or Mozart); (2) the copyright has been forfeited (e.g., dedicating a work to the public domain with a license) or (3) copyright is inapplicable for that work (e.g., works from the U.S. government are excluded from copyright). Simply making something available for other people to consume does not forfeit any intellectual property rights or put it into the public domain.

3 The standard of copyright applying at creation was established internationally by the Berne Convention in 1886. The United States did require registration of copyrighted works before joining this treaty in 1989. Though in the United States there are legal advantages to registration, such as statutory damages for infringement, since 1989 neither a mark nor registration is required for a work to be considered copyrighted.

4 “Fanworks” refer to art, writing, music, video, or other media that is based on media properties such as television shows or books. For example, a fan fiction story might involve the continuing adventures of the characters from *Harry Potter*. Practices dating back to Sherlock Holmes and Jane Austen makes the “fandom” community some of the very earliest remixers [8].
Unsurprisingly, prior work reveals misconceptions about copyright law among those who inevitably engage with it—including remix video creators [1], documentary filmmakers [23], and librarians [17]. However, even without the knowledge to back it up, intricate intuitions about the law can form, which we have specifically seen in communities of online content creators [13,14,27,28,29].

Though policy-relevant themes such as these have been addressed in recent CSCW work, they are rarely prioritized [20], and discussions of privacy and security are more common than discussions of intellectual property. Jackson et al. have cautioned against a model of policy within CSCW research as static, irrelevant, or merely an external backdrop, and suggested instead that it be considered a key third factor alongside design and practice [20]. They present these factors as intertwined in CSCW systems: technology can have consequences for proceeding social and policy arrangements; policy can impact how tools are used and understood; and unanticipated uses can impact both design and policy. One purpose of the current work is to better understand the role of copyright policy alongside design and practice within the context of online creativity.

METHODS
For this study we wanted to focus on activities for which the relevant law can be particularly complicated (such as fair use), and therefore sought out online communities where creative appropriation is common. Based on the creative activities reported by participants in a previous study about remix and fanworks [13], we identified four major media types associated with this type of creativity: art, music, video, and writing. In determining which communities to study, we used Alexa search engine rankings as a proxy for popularity, choosing search terms for each media type that specified remix or appropriation: “fan art” (art), “music remix” (music), and “fan fiction” (writing). For video, due to difficulty finding online communities in a search for “remix video,” we chose to examine one site with a broader focus (keyword “video”) and one with a narrower focus (keyword “machimina” as an example of a specific type of remix video).

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### METHODS
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### Table 1. Website information and statistics

<table>
<thead>
<tr>
<th>Website</th>
<th>Description</th>
<th>Approximate Total Public Posts</th>
<th>Approximate Posts Scraped</th>
<th>Posts in Data Set</th>
<th>Estimated Copyright Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>DeviantArt Art</td>
<td>One of the largest social networks on the web, a popular space for both amateur and professional to showcase their work</td>
<td>15,800,000</td>
<td>49,464</td>
<td>50</td>
<td>3%</td>
</tr>
<tr>
<td>Fanart Central Art</td>
<td>An online art gallery that hosts primarily fandom-based art and fiction, but also allows original submissions</td>
<td>278,000</td>
<td>20,875</td>
<td>50</td>
<td>11%</td>
</tr>
<tr>
<td>REMIX44 Music</td>
<td>A Commodore 64 and Amiga music remix community, containing news and reviews as well as a place for users to upload their work</td>
<td>73,000</td>
<td>1,099</td>
<td>50</td>
<td>5%</td>
</tr>
<tr>
<td>OverClockRemix Music</td>
<td>A video game music community featuring fan-made remixes and information</td>
<td>636,000</td>
<td>7,642</td>
<td>50</td>
<td>5%</td>
</tr>
<tr>
<td>YouTube Video</td>
<td>The largest user-generated content video site on the web; though it does not have a general forum for discussion, it does have a very large help forum in a Google Group</td>
<td>500 per day</td>
<td>17,546</td>
<td>50</td>
<td>13%</td>
</tr>
<tr>
<td>MMORPG Forum Video</td>
<td>A site for discussion of massively multiplayer online roleplaying games; the largest sub-forums are dedicated to machinima, Warcraft movies and Warhammer movies</td>
<td>113,000</td>
<td>364</td>
<td>23</td>
<td>3%</td>
</tr>
<tr>
<td>HarryPotterFanFiction Writing</td>
<td>The oldest fan fiction site on the web dedicated to the Harry Potter novels, housing over 78,000 stories</td>
<td>70,000</td>
<td>1,211</td>
<td>16</td>
<td>2%</td>
</tr>
<tr>
<td>Twisting the Hellmouth Writing</td>
<td>A fan fiction archive with over 15,000 stories based on the Buffy the Vampire Slayer and Angel television shows</td>
<td>54,000</td>
<td>1,590</td>
<td>50</td>
<td>7%</td>
</tr>
</tbody>
</table>
For each of these keyword searches, we chose the top sites under the search results that: (a) were online communities; (b) featured user-generated content of the appropriate media type; (c) had active public forums with more than 100 posts; and (d) were primarily in English. We chose two sites for each media type (see Table 1).

In the spring of 2013, we scraped public forum posts (only those posts viewable to anyone on the web without creating an account or logging in) associated with these online communities. A “post” includes the initial post along with all the comments that follow. We collected the content as well as header information (title, author, date/time) for each post and corresponding comments. In narrowing down the data set of all forum posts to only conversations about copyright, we had to go beyond the obvious method of doing a keyword search for “copyright.” Using only this keyword would leave out relevant conversations that did not include the word—perhaps systematically so, as some posters may not know enough about copyright to use that term. Using a sample of 200 posts from these online communities, we pulled out common related terms in order to create a comprehensive set of keywords to search for conversations about copyright. We used an inter-rater reliability measure to validate this manual judgment by having two additional coders judge a random sample of 10% of these posts, resulting in 100% agreement with the original coder. We also validated the sufficiency of the keywords by testing them on another sample of posts and then comparing the search results to another set of manually judged posts. Though there were a number of false positives, there were no false negatives. The final list of keywords used included: attorney, copyright, copy, copying, illegal, infringement, lawyer, legal, license, permission, plagiarism, plagiarist, rights, steal, stole, and trademark.

We completed a scrape based on these keywords, resulting in nearly 100,000 total posts across our eight different forums (see Table 1). Because there were false positives in this data (e.g., a post that might contain the word “legal” but discuss privacy rather than copyright), one coder (whose judgment was validated using the inter-rater reliability measure noted above) used a random number generator to sample posts from this group, adding posts to our final data set only if they included some discussion of copyright. We collected a maximum of 50 posts from each site, though some had less than 50 as their total number of posts about copyright. Because some sites had a much smaller number of posts, keeping this number small allowed us to have a fairly stratified sample. In sum, we began with a set of millions of forum posts across eight different communities, narrowed this down to approximately 100,000 posts that might be about copyright, and then narrowed this to a tractable number of posts only about copyright based on a random sample. Our final data set has a total of 339 forum posts.

In analyzing our resulting data set, we looked to grounded theory, a method for collecting and analyzing qualitative data in order to generate theories that are “grounded” in that data from the beginning [5]. It provides a set of systematic guidelines for analysis while maintaining flexibility to fit the given set of data. This approach is particularly useful for sifting through large amounts of unstructured data, and makes its greatest contribution in areas where there has been little research [24]. When using this method for extant texts such as Internet discussions, it is important to situate the texts in their contexts and incorporate that context into the generated theory [5]. Grounded theory beginning with open coding is a technique used often in online forum content analysis [16,31].

Using this approach, we began with inductive, open coding in which we coded the data for emergent phenomena [32]. Two coders, including the first author who is a law school graduate and copyright expert, coded subsets of the data independently, meeting periodically to discuss the codes and synthesizing them into a single set. Refining the codes was an iterative process until we had a total of 87 open codes that were grouped into 8 higher-level categories. We considered our codes finalized when the categories were “saturated”—that is, we found no new insights or new properties to these categories in the remainder of our data set [5]. Using these finalized categories, we coded the data again, including an overlap of 10% which we used to calculate inter-rater reliability with a percent agreement of 94% and Cohen’s Kappa of .77 [26].

**Data Set Limitations**

Likely because the forums we studied are all English language and most of the sites based in the United States, most legal discussion focused on U.S. law. In our data set, only 5 posts out of 339 made any specific reference to the law of another country—for example, fair use equivalents in other countries such as Canada’s fair dealing. Though many core copyright concepts discussed are largely universal due to the Berne Convention, it is also true that international law complicates issues of copyright and that social norms about copyright can vary wildly from culture to culture.

Since we do not have demographic information for the online communities we studied beyond the posting statistics noted in Table 1, we cannot make statements about the representativeness of these users for content creators generally. Additionally, the sites represent a range of different internal copyright policies and related technologies. For example, YouTube uses an automated

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\[5\] The Berne Convention (created in 1886) is an international agreement that governs copyright, requiring signed countries to recognize the copyrights of authors in the other countries. It contains some universal provisions, such as a minimum copyright term and allowances for fair use. As of 2013, 167 states are parties to this agreement. The United States signed on in 1989.
content ID system to assist in removing copyrighted content and includes pages of copyright policy explanations, whereas Remix64 has no Terms of Service posted at all. Though we also know that based on readability levels that even if users did read site policies (which most do not) that they might not understand them [12]. Because these eight sites are quite different in terms of user base and copyright enforcement, the issues discussed in our results unless stated otherwise appeared for at least two of these sites in our dataset. We saw evidence that social norms and copyright literacy among users varies across sites; however, it was not within the scope of the current study to compare and contrast these sites.

It should also be noted that though all of our data comes from information publicly viewable online, we still opted for “light disguise” as suggested for studies of amateur artists online [3]. Therefore, we omit usernames from our results as well as any quotations that might address blatantly illegal activity or reveal personally identifying information.

**RESULTS**

Though our final data set consists of 339 randomly sampled posts, these were not the only copyright-related posts in the hundreds of thousands of forum posts available to us. Due to false positives, the initial results of our keyword search does not give us an accurate count of how many copyright-related posts there were on these sites. Therefore, in order to estimate the prevalence of this topic of conversation, we also took a random sample of 100 posts from each of the eight sites. We noted how many copyright-related posts there were in these samples, resulting in a basic estimate for the prevalence of copyright as a conversation topic on each site (see Table 1). Though these percentages might seem small, three percent of DeviantArt’s 15 million posts, for example, is still hundreds of thousands of conversations.

None of the online communities that we studied have anyφblatantly illegal activity or reveal personally identifying information.

The final category is an overarching problem, and the others focus on either the point of view of creators who are appropriating work, or the point of view of creators who are concerned about protecting their own work. We use these five problem types as a framework for discussing this data.

**Avoiding Trouble**

A common problem directly expressed by these creators is worry over whether something they are doing might be infringing someone else’s copyright. Many of the posts are essentially asking “Is this going to get me into trouble?” or “How can I avoid getting into trouble?” Out of all of the question-and-answer posts, these types of questions are the most prevalent. Many of these questions are quite nuanced, without simple yes-or-no answers.

For example, two questions with potentially complex answers come from Overclocked, a music remix site: “Is it legal to use extracted vocals in a remix of a commercial song?” and “Is it copyright infringement to use chiptune SFX on an album designed to generate revenue as a donation to a religious entity?”

The advice that the posters receive in return varies in quality, but interestingly, tends to veer towards stricter interpretations of copyright. It is more common to see “No you can’t do that” than “Yes you can” or even “Yes you can if you follow these guidelines.” Of course, not all copyright interpretations are strict; when we do see “Yes you can,” it is often followed by “… because no one will notice.”

**Site: MMORPG Forum** It's not like the RIAA goes around youtube and puts a big lawsuit on them for using their music. Do you REALLY think that every single movie maker has taken the time to buy the rights of the music they used? Get some common sense, imo.

However, particularly keeping in mind that the other community members answering the questions are likely not copyright experts, the “better safe than sorry” flavor of advice makes sense.

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6 The Recording Industry Association of America is the trade organization that represents record labels in the United States, a large part of their mission being to protect the intellectual property of these labels. They have brought a number of high-profile lawsuits for copyright infringements against individuals engaged in file-sharing.
One of the responses to the religious donation question above was: “The best thing you can do I would think is to phone and/or email the companies own the sounds.” This is not bad advice, and in fact “ask permission” is a common refrain. However, it is also the case that an amateur remodel asking a copyright holder to ask for permission to use something is unlikely to get a helpful result. Nearly every time someone in one of our posts mentioned asking a copyright holder, it went something like this comment on a Remix64 post: “I tried to contact the legal owner of the music but the Liverpool studio didn’t take time to answer my question.” Advice to ask for permission was also the response to the following two questions from worried creators.

[DeviantArt] Let’s say that I want to use a photo of a celebrity in a piece of digital artwork. The photo would not be the entire piece...just a small part of it. (The vast majority of the piece would be my own work.) Unfortunately, I realized (belatedly) that pictures of celebrities are generally copyrighted. I’m not planning to sell my work... just display it online. Is there any possible way to use celebrity pictures WITHOUT committing copyright infringement?

[YouTube] I made a remix for a song by artist Linkin park and have no intentions to sell or use the video for commercial purposes. how do I remove copyright flags???

In both of these examples, the original poster is asking about a remix activity that based on the descriptions here could very likely be fair use. In our data there are a number of cases of fair use not being discussed as an option. For example, one answer is: “You need a LICENSE in writing from the copyright owner or his agent spelling out in nauseating detail just what you can and cannot do with the audio. Nothing else matters.” The original poster’s response was to thank the respondent profusely for the advice, implying that they will likely follow it. However, as noted above, contacting copyright owners rarely has a positive result. One might speculate that given this advice the remixers might simply decide not to post their video after all. This is a solution to their problem of how to avoid infringing copyright, though arguably not the ideal one.

This category is also where we see the most examples of what could be considered legal advice—such as asking a copyright holder for a license. Though we sometimes see an IANAL (“I am not a lawyer”) disclaimer, more often we simply see advice provided with complete confidence but no credentials. In contrast, in every rare instance of actual expertise, we see an “I am a lawyer, but” disclaimer stating that they are not providing actual legal advice (which is dangerous for lawyers to do outside of an attorney-client relationship). Sometimes posters will provide links to actual legal resources, though this is somewhat uncommon. Of course, we also see a lot of “you should consult a lawyer” as advice—which like the suggestion to ask permission is not bad advice, but impractical. Lawyers are expensive, perhaps a reason why these creators are asking advice from strangers on the Internet in the first place.

Many of the posters also note that they researched the issue first themselves and were confused by the law or unable to find satisfactory answers. This is one place where we see a potential failure of site policies or copyright explanations, when posters note that they were unable to find the information that they need.

Dealing with Consequences
Also from the perspective of those creators who are appropriating content, a related problem to avoiding trouble is dealing with consequences after the fact. Many of the posts in our data set were creators asking for advice about what they should do (or simply complaining) after they have been accused or officially sanctioned for copyright violations—whether or not that accusation or sanction was legitimate.

[YouTube] So I posted a video and used some music, I then got an e-mail from youtube saying it was copyrighted by SME (who ever they are) and I wanted to know, will I go to jail or [lose] my channel?

[FanArt Central] I did not edit the images to my desire, I drew them, with my mouse. I am not trying to hide the fact that I used heavy references on this piece... If this is against the rules, I will be glad to remove it. If not, is there any way to proclaim that this is my work, and for people to stop accusing me?

A lack of knowledge also contributes to this problem. Frequently the posters do not understand why they were sanctioned, either because of confusion about copyright law or confusion about site policies. Responses tend to cite these policies rather than the law, though the two are typically linked. In response to the YouTube question above, someone simply states “If you get three copyright strikes your account will be terminated” while another response briefly explains the Automated Content ID system that seeks out copyrighted content on YouTube (though no one assures the original poster that jail time is not a potential consequence for a YouTube copyright strike).

This problem is more frequent on YouTube than on the other sites studied, likely due to the Content ID system that automates taking down videos when there are copyright claims. Of course, this automation also means that there are false positives, when content is taken down erroneously

7 Under the Digital Millennium Copyright Act, third-party content providers such as YouTube are required to take actions on copyright claims by removing the content accused of infringing. This “takedown notice” procedure notifies the person who uploaded the content, providing options for filing a “counter-claim” if the content is not infringing. The DMCA also makes it a criminal act to circumvent technological copyright protection measures. Because remixing often requires gathering source material, the DMCA often hits hardest at transformative uses by people who are attempting to conform to the law [35].
[30]. There have been some well-publicized examples of YouTube removing remix videos that are almost certainly fair use, for example [15]. Unfortunately, though fair use’s flexibility makes it valuable as a legal doctrine, this same flexibility makes it a nightmare for computational models [11]. Previous research has uncovered that fear of work being taken down can affect technology or site choice [13], and here we also see examples of creators deciding to stop using YouTube due to disagreement with their copyright policies.

[YouTube] These guys are making fools of themselves claiming they have rights to Handel, Bach, and Mozart. It’s just an excuse to put advertising on the screen when the video runs. I signed up on Vimeo.³

[YouTube] As long as this problem continues unsolved, and YT staff does not fix it, there’s no point in being a partner (unless I can get full immunity)... a few seconds from some random WMG music was heard inside those files. This can be easily classified as a fair use in the copyright laws.

[YouTube] I've looked all over Youtube. There is no place to report People Continually falsely copyrighting, and people who threaten to take channels down by False flagging. Am I supposed to sit here and watch my channel get taken down for lies? When you search through the report section, there is no option for these things. YOUTUBE, DO SOMETHING!

In our data set, references to legal consequences were scarce. Typically the worst consequence would be the removal of work or of a user account. However, outside official sanctions, accusations within the community, fueled by social norms, can have consequences as well. This is discussed in more detail from the opposing point of view in terms of dealing with cases of infringement. However, it is notable that in the current category, the posters do not tend to receive a lot of sympathy in response to their problems. There are few examples of other community members coming to their defense or noting that they may have been wrongly sanctioned. There appears to be a default assumption that site sanctions are typically correct.

Fear of Infringement

In the previous two categories, we see the point of view of mostly artists who are appropriating existing work, either in legitimate remixes or actual infringement, and the problems caused by unclear law or policy surrounding content reuse. In these next two categories we get the point of view of copyright holders—when artists are trying to protect their work from infringement.

Though there are examples of this problem across all studied sites, it appears to be most frequent among digital artists, especially on DeviantArt. This makes sense, as DeviantArt hosts a number of professional artists for whom protecting the monetary value of their work is a real concern. Plagiarism is a much more common complaint than remixing, and there is a great deal of discussion about the role of credit and permission.

[DeviantArt] I would like to make it so that I can display my art work but not allow others to copy it. How do I do that?

[Harry Potter Fan Fiction] I was thinking about posting my stories online and I'm wondering how safe it really is. Even if I put a copyright on it and say 'Everything you don't recognize is property of me' there is still a chance that someone will take it, right? Is there any way I can protect my work more? Thanks.

Posters often express frustration that there isn’t more that they can do to protect their work—for example, that the site moderators aren’t doing enough or that the site’s policies aren’t effective, sometimes making suggestions for policy or workflow changes.

[DeviantArt] I've reported it to dA a few times over the last couple of months, but no action seems to be taken. One report even came back "invalid" (she stole the photo from the girls private Facebook for Christ's sake)

[DeviantArt] I'd like to suggest if at all possible for DA staff to make it to where deviations that are submitted in must be manually approved or denied. The reason I say this is because there are people who have been treating DA like it's myspace, photobucket, facebook, etc in which completely goes against the copyright policy

This demonstrates something of a reversal from remixers deciding not to use a particular site for fear of their work being flagged for infringement and removed. Instead, we see creators deciding not to use a site because of fear their work will be infringed upon.

[DeviantArt] I just finished a play but nobody wants to look at it because they're busy. Of course I got it done really quickly, it's the FIRST DRAFT and I need you to look at it, mom! :< And I'm not posting it here for fear of Copyright Infringement

We also see incomplete or incorrect information contributing to this problem, as many creators have some fundamental misunderstandings about the way that copyright works. The advice for “how can I protect my work?” can be as bad as some of the advice for “how can I avoid infringing?” For example, copyright registration is not necessary—copyright vests at the time of creation. A common misconception is that you have to do something to have rights in your work (such as register it with the Copyright Office).

[DeviantArt] there are several different ways to copyright. the "automatic" copyright actually only protects you to a

³ Handel, Bach, and Mozart compositions would certainly be in the public domain—though sound recordings may not be.
Dealing with Infringement

With respect to possible infringement that has already taken place, we do see some “someone stole my work, so what do I do now?” sorts of questions. However, the more common interactions here are calls for action or public shaming. Though there are occasional threats for legal action, mostly these posts include requests for other community members to report someone for a Terms of Service violation, or simply calling them out publicly. This is a form of community social norm policing.

[Overclocked] Why exactly does it say [username] and have a link to [username]’s (old?) webpage by it? Explain that to me and then I’ll be happy to comment on your ALLEGED remix. Otherwise, nice try, genius. Don’t let the door hit you on the way out, music thief.

[Twisting the Hellmouth] it does smack of plagiarism, though at least he's up-front about saying he didn’t write it. Not naming the real author is VERY bad, and I'm about to write a review saying so.

Here we see strong evidence of social norms against plagiarism within these communities. These instances of public shaming can arguably be more effective than official sanctions in these kinds of situations, particularly when the community members are unclear on the law or do not have faith in the site itself to properly enforce it. Some legal scholars have noted that particularly in realms in which the law is gray, social norms can carry more weight than written law [10,14]. Fan communities in particular have been described as “hypervigilant” when it comes to policing plagiarism, with one fan fiction community going so far as to maintain a list of known plagiarizers [4].

As far as the outcomes of these posts, sometimes they work exactly as intended:

[Remix64] well it's all sorted now. Got an apology from him, so the matter is resolved as far as I'm concerned. Happy for this thread to be deleted.

Other times, they can backfire. This is also an example of a social norm—a norm about what kinds of behavior needs policing and how to go about it.

[Twisting the Hellmouth] I've looked the forum over and you show an astonishing lack of common sense when it comes to "problems", especially when it involves moderators. There's nearly a half dozen occasions I've located on here where you could have easily contacted a site moderator and/or administrator regarding your perceived "problem", but have decided to air it publicly to try and stir up other members so you don't have to stick your neck out by yourself.

Additionally, sometimes social norms or even community policies do not actually track to the law. We have seen evidence of this previously with respect to understandings of fair use among remixers [13]. One striking example of this is the policy from the Twisting the Hellmouth fan fiction community about appropriation of elements in the work posted there. In an initial discussion of this topic, a writer asked if this was permissible, and another poster explained why they considered it unethical.

[Twisting the Hellmouth] I'd expect you (and we would double check) to obtain permission to do fanfic based off [a fanwork]. It'd be like you reading one of [username]’s fics and then deciding to make a "sequel" out of the blue. I wouldn't like it, no other author here would like it.

This is actually a common norm within fanworks communities, when the same guidelines for re-use do not apply to other fanworks as they do for media properties. In other words, it’s not okay to remix the remixes. Though fan creators recognize that this is not a legal or economic argument, the stance revolves around community norms and established etiquette [4]. The original poster here noted the potential hypocrisy in this stance, but then stated an intention to follow the community norm.

[Twisting the Hellmouth] how does this differ from taking a story written by any established author? have we gained the permission of every writer and director of every single Book, TV show and film that the site covers? don't understand how someone who writes a story based on someone else?'s work without getting permission from the original writer can complain about someone writing a story based on their work. It just smacks of double standards to me. But that is just my opinion and I'm more than happy to follow the general fanfic rule that it's taboo.

In a later post in the forum, the site moderators came to the community for input on an official policy on this exact issue, and put forth this policy:

[Twisting the Hellmouth] I came up with this as a potential solution for authors who want to write stories based on the

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9 Creative Commons licenses are a method for content creators to share their work more freely by communicating that it is “some rights reserved” rather than “all rights reserved” [25]. For example, a DeviantArt artist could put a Creative Commons Attribution No-Derivatives Non-Commercial license on their artwork, meaning that someone else could copy and use it, but they would have to credit the creator, could not modify the piece, and could not make any money from it.
stories of other authors. Quote 1. If you want to base your story on another author's work you must contact them and ask permission and attribute them if they give it. Ideally, this should be before you start writing so you don't waste your time if someone responds negatively. 2. If you do not get a response within two weeks, you can post the story but must still attribute their work. 3. The original author can ask to have your story removed from the site at any time, even if they have given their permission in the past. They have the right to change their mind.

Interestingly, this policy also goes beyond the requirements of the law. Assuming that fan fiction is fair use, then permission is not required. However, Twisting the Hellmouth already has a policy in place that prohibits posting fan fiction that is based on the property of copyright owners who have expressly stated that they do not want fan fiction written about their work (for example, author Anne Rice saying that it “upsets [her] terribly” and George R.R. Martin stating that he doesn’t want people “making off with” his characters [4]). This request does not actually hold any legal weight in cases of fair use, but is instead an ethical norm. Unsurprisingly, there were community members who felt that the policy of non-response indicating permission was also too lenient, however.

Twisting the Hellmouth I do not know of any fanfiction archives that allow or even support authors playing in other authors’ verses without their permission. I don't think that this site should become the first. I do not want authors on this site to feel that their hard work is not protected. I do not want authors to feel that their stories, their ideas, are up for grabs by whoever wants them.

The excerpt above provides an example of a situation in which the law is less strict than a website policy (based on an ethical judgment rather than a legal one) which is less strict than a social norm. Similarly, Twisting the Hellmouth requires disclaimers (“I do not own the characters in this story”), which carry no legal weight, but follow social norms among fanworks creators regarding credit. Negotiating multiple sources of rules seems to be one cause of confusion in these spaces.

Incomplete Information

Though a lack of understanding of the law or site policies is an overarching problem throughout our other categories as well, there are many instances of information seeking behavior outside of discussions of specific cases. Sometimes these are simply expressions of confusion about copyright law in general. Perhaps they choose to post about it in these communities because they have seen other discussions of copyright. For example, this poster on Overclocked asked a very basic question about copyright law that did not directly relate to the content of the website:

Overclocked] If downloading copyrighted music for free is illegal, then why can we listen to a music video on youtube or some anv of it. That’s how I listen to music that I don’t own.

In these general discussions as well as in specific instances arising from the problems previous discussed, we see both correct and incorrect explanations of the law in response. Some posters (though IANAL seems to apply) are actually very knowledgeable about the law and appear to seek out these discussions specifically to answer questions. One poster in the Remix64 music remix community appears in 35 out of 50 copyright-related posts, almost always answering questions.

Of course, the danger is that there is no simple way to tell the good from the bad when it comes to legal information and advice. For example, the following is an explanation of fair use provided by a poster, and though it contains some elements of truth, it is not quite right, since it suggests that only educational or news purposes constitute fair use.

[Twisting the Hellmouth] Actually under copyright law, the copyright owner doesn't have to prove a person made a profit OR caused damage. They just have to prove someone else used their copyright material in an illegal way. And almost any use is illegal. Unless that someone else is using the work as a reference in a non-fiction educational work or a news article, they will lose the law suit.

In a more troubling example, this was a response to a post about a YouTube takedown in which the original poster stated that they thought their remix video was fair use.

[YouTube] There is really no such thing as fair use. If you use someone else property without permission it's still called stealing.

When the original poster then cited the fair use provision in the Copyright Act, this was the response:

[YouTube] You might want to look into that law you posted the Copyright Act 1976 because since 1976 to 2010 it's been updated to take in this little thing called the internet. That's like me bring up a law from 1853 trying to defend my right to drive without pants. 10

Sometimes legal explanations aren’t blatantly wrong, but just simplistic.

[YouTube] There's nothing particularly mind-boggling about copyright law: only the original owner has the "right", literally, to make "copies."

At least occasionally, community members will point out that it might not be the best idea to trust strangers on the Internet with legal advice. In one exchange on DeviantArt, one poster argued “I’d tried looking up on the net, but I find...”

10 Even though the Copyright Act is decades old, it is still the law of the land. This is one reason that it is desirable for laws like fair use to be somewhat vague and flexible, because they can be interpreted in light of new technology [2].
it easier to get a straightforward answer from a person’s personal point-of-view than to try to make sense of miles and miles to text,” to which the response was, “Someone’s point of view could be wrong, though.”

Though these question-and-answer posts are the most common in our data set, there are also examples of higher-level discussions about copyright, often containing nuanced understandings of the issues involved even if not representing completely correct interpretations of the law.

Twisting the Hellmouth | I imagine most people here have read about the book series “50 Shades of Grey”, a recently published erotic novel trilogy that was originally posted as “Master of the Universe” – a Twilight fanfiction story posted on fanfiction.net. I thought it would be appropriate here to discuss the morality – perhaps even the legality – of fanfiction writers publishing their works with a few changes.

Sometimes these discussions do not even relate to the content of the community—for example, a discussion about software piracy on a music remixing site—which suggests that for these types of content creators copyright is something that is of general interest to them even outside of the immediate challenges they face.

Overclocked | I find that more and more people around me have no scruples with illegally downloading software. I would love, believe me, to own some of these programs, but I know that it is stealing. I feel you are no less a criminal for pirating programs than for shoplifting or pickpocketing. Is it easier to justify because you won’t ever see the guy who’s losing money, often thousands of dollars, because of your whim? Someone want to explain your reasoning behind doing this? You know you do it.

A side effect of these discussions and information-seeking is that some community members are doing legal research and learning things that they wouldn’t otherwise, due to their engagement with these communities and this type of content creation.

Twisting the Hellmouth | I write fan fiction of a limited sort (BTVS or Crossovers with BtVS) so I’m not exactly unbiased. When I first started writing it I did some basic research on the legal issues. My understanding is that there haven’t been any actual court cases involving fan fiction (In the US anyway).

Overclocked | Let me just say I’m really enjoying this conversation. I went to school for music business and I like honing my knowledge with this kind of academic discussion, especially when the result of the exchange can potentially help someone!

Therefore, these copyright discussions maintain a precarious position of both advancing and contributing to knowledge, and potentially spreading misinformation.

DISCUSSION

We have described five emergent themes in our data as problems or challenges faced by creators in these online communities—but what are the consequences of these problems? Based on our data set, we saw little evidence of legal consequences beyond those handled directly by the website (such as DMCA takedown notices). Though lawsuits from content owners are not outside the realm of possibility, in practice they are more likely to go through the website itself to have content removed.

Therefore, setting aside that more unlikely consequence, there are four primary potential bad outcomes for content creators: (1) their work is removed from the site due to a policy violation or takedown notice; (2) their work is copied or distributed by someone else without their permission; (3) they decide not to upload their work to the site because of fear of getting into trouble or fear of someone else copying it; or (4) they violate a rule or norm and are shamed or ostracized by the community.

The secondary outcome of most of these, besides the distress of the creators themselves, is less creative work in these communities. Arguably this is a poor outcome for both the websites and the creators, as well as outside consumers of that content. Fair use, in addition to being context-dependent, tends to be value-laden as well, and not every lawyer or judge will see remix as a valuable form of art (while many others would disagree) [36]. However, “less creativity” as an outcome also goes against the spirit of intellectual property in general—which as provided for in the Constitution exists to incentivize invention.

In legal terms, a chilling effect is when someone doesn’t do something that they should be able to do because of a fear of legal consequences. Though traditionally examined in terms of the suppression of speech, this is something that can happen with creativity as well. As legal scholar Rebecca Tushnet points out, even though the law at its core values creativity, not everyone has the same tolerance to risk and so it is still susceptible to being suppressed by copyright expansionism [34]. Our data set showed specific instances of chilling effects within these communities (e.g., decisions not to upload work onto YouTube due to improper takedown notices), and we could extrapolate to more (e.g., creators being told that their work would definitely be infringing if they don’t get permission from the copyright holder). Additionally, content creators not trusting in the site to protect their work from copyright infringement is a kind of reverse chilling effect that has the same outcome. Choosing to not use a technology for fear of copyright infringement is similar to evidence of technology non-use due to fear of privacy invasion [22]; both represent a lack of faith in the website to protect their interests.

Accepting these as problems that should be addressed, where do we begin in thinking about solutions? In our descriptions of the five copyright-related challenges observed in these communities, we see two major recurring
causes. The first is a lack of information—misunderstanding, confusion, or ignorance of the law or site policy, and difficulty finding answers when sought. The second is some perceived failing of the site or technology itself—not providing needed information, policy or enforcement inadequacies, and imperfect or overreaching enforcement tools.

When it comes to the first problem of lack of information, though simple lack of knowledge and lack of research can explain much of it, unclear law and unclear community policies are contributors as well. This lack of clarity is also exacerbated by the spread of misinformation in the very conversations that we studied. Though some of the community members are well informed about copyright law and do a service to their community by answering questions, there are also many instances of incorrect information or simple bad advice. We could argue for better copyright education for people in general, but when misinformation and confusion is affecting user experience on these websites, then it becomes a usability problem appropriate for site designers to address.

From a design point of view, this is an incredibly complex space. Prior work has shown that when it comes to copyright, there are instances in which what the law says, what people think the law says, what people think is ethical, community norms, and what people actually do are completely different [13]. The discrepancy between law, site policy, and norms on Twisting the Hellmouth is a telling example of this kind of complexity. There we see a legal rule (fair use for transformative work) that is less strict than a site policy (seek permission when possible for re-use of fan fiction elements) that is less strict than a community norm (never re-use fan fiction elements without permission). Piling onto the problem of the law itself being gray, creators may also have to deal with multiple sources of rules that sometimes contradict each other.

IMPLICATIONS FOR DESIGN
In thinking about potential solutions from the point of view of online community designers and maintainers, our findings point to some specific recommendations: (1) providing plain language explanations of copyright policies; (2) monitoring user concerns and questions about copyright; (3) providing dedicated spaces for legal conversations and questions; (4) considering existing social norms in the creation of policies; and (5) scaffolding copyright knowledge in the design of content uploading tools.

First, it is important to consider the clarity, readability, and comprehensiveness of copyright-related site policies. Unfortunately, Terms of Service in these online creative communities tend to be long and at a high reading level [12]. YouTube and DeviantArt, the largest of the sites we studied by far, both have pages dedicated to copyright policies, which include some plain language explanations of copyright law. YouTube even has a “Copyright School” video where the explanations are provided by cheerful cartoon characters. Though both sites should be commended for plain language copyright policies, and in fact for mentioning fair use in them at all (rare among these types of sites), their explanations present fair use as something confusing and scary that should only be attempted with the help of an attorney. To quote DeviantArt’s section on fair use:

[Fair use is] very limited, complex to analyze under the law and require[s] the help of expert advice from a lawyer. We recommend you talk to your own lawyer if you want to know more about fair use as it applies to the work you are doing. If it turns out that it isn’t fair use, you may be liable for very serious money damages.

In other words, as stated in YouTube’s Copyright School: “You could get in a lot of trouble. That’s how the law works.” Presenting fair use in this manner could arguably contribute to chilling effects. Similar to if advice is “ask for permission,” if advice is “hire a lawyer,” then the better-safe-than-sorry response would likely just be to not post the work. Policies like these could contribute to the “climate of fear” that exists among remixers, the cloud of legal uncertainty formed due to a lack of legal precedent [36].

Part of the problem here is that though ideally we might like to suggest that these sites rewrite their policies to be friendlier to fair use, there are competing interests at stake. In terms of lowering both cost and legal risk, it is likely not in the sites’ best interest to adjudicate fair use themselves. The flexibility of fair use as a doctrine means that there are examples of fair use being construed strictly, which also accounts for risk averse behavior. Meanwhile, the sites also have to consider the interests of both users who are appropriating and users who are in fear of others appropriating their work. This is a difficult balance to strike, but simply providing copyright policies in readable language helps with the user information deficit.

Additionally, even if policy or Terms of Service re-writes are an impractical solution (consider as well the cost of attorneys!), these websites have a valuable resource at hand. It is the same one that we have for this study: information about what their users do and do not understand about copyright law and policy. Even something as simple as the construction of an FAQ that covers recurring questions in these communities would be a step in the right direction.

Additionally, none of these communities have a dedicated space for questions or conversations about copyright. We do see knowledgeable community members appearing in these posts to answer questions, and they might do so even more frequently if the relevant posts were easily accessible. Encouraging critical thinking about copyright among community members could also have positive policy outcomes. Aufderheide and Jaszi argue in their book Reclaiming Fair Use that it would be in the best interest of
creative communities to articulate their own understandings of fair use, because judges sometimes consult patterns of use when making fair use determinations [2]. For example, the documentary film community has benefited from a document of best practices.

Also, the Organization for Transformative Works (OTW), a non-profit dedicated to preserving and defending fanworks as legitimate cultural objects, has had an influential seat at the table in U.S. copyright policymaking [36]. This organization formed following online discussions about disillusionment in the fan community about the policies of existing online communities and a desire to create a space of their own [21]. Additionally, the fan fiction archive created by OTW volunteers, Archive Of Our Own, has both copyright policies and design features derived from the existing social norms of the community. Legal scholars have suggested that copyright law could benefit (and indeed, be more frequently followed) if it more closely resembled emerging copyright norms [14,33]. Though the law is slow to change, websites have more control over their own policies and can take into account the norms of their user base.

In terms of potential technological solutions, unfortunately automated copyright infringement detection is imperfect [30], and the flexibility of fair use exacerbates the problem even further [11]. However, there may be simpler solutions for small positive changes. Consider this idea put forth by a poster in the DeviantArt forums:

M[y suggestion would be: make a big fat explanation in the poems-upload-centre under the "submit preview picture" upload, that only pictures may be uploaded, that were created by the artist himself. And that neither pictures found in the internet, e.g. by google, nor pictures that you own (e.g. that hangs on your wall) may be submitted as long as you are not the artist and owner of the copyright.

The idea here is essentially a copyright reminder at the time of upload. Of course, this specific poster’s solution does not account for fair use. However, one example of an existing solution is the process for uploading an image onto Wikipedia, which functions as something of a fair use wizard [15]. Wikipedia requires information about the origin of the image, and if the user chooses “I believe this is fair use,” there are options for common fair use rationale to choose from, such as “the object of discussion in an article” or “excerpt from a copyrighted work.” This essentially scaffolds an understanding of fair use for the user. If YouTube, for example, had a similar wizard that prompted for fair use rationale if they indicate that the video contains third-party content, then this would not only similarly scaffold knowledge, but the information could be passed on to copyright holders before they can issue a takedown notice. Decreasing the knowledge gap here would also shift some balance of power to the content creator.

Future Work
Because intellectual property is not an area that has been extensively studied within CSCW or HCI, there is a great deal of opportunity for future work in this space. As noted in discussing the limitations of this data set, the current study is confined to specific websites with a purposeful skew toward amateur remix and appropriation. There are a number of other contexts in which discussions of intellectual property are prevalent online—for example, file sharing communities, Wikipedia Commons, and commercial sites such as Etsy. There is also opportunity to look more closely at cultural differences in norms, as well as issues specifically related to international law. Ongoing work includes comparisons of social norms across different types of communities, as well as a closer look at the different stakeholders, such as the people crafting copyright policies.

Other data sources as well could provide more insight into this subject. One observation from our data is the prevalence of copyright disclaimers. Though they carry no legal weight, they are commonplace in fanworks [4,33], and also appear frequently accompanying YouTube videos (e.g., “no copyright infringement intended”). This is an example of information about copyright that could be gleaned from the artifacts themselves rather than explicit conversations among users. Moreover, the Wikipedia upload wizard described above essentially provides thousand and thousands of examples of fair use rationale given by Wikipedia users.

CONCLUSION
Unfortunately, copyright will continue to be a hard problem in online creative communities. There are many stakeholders with competing interests—lawmakers, copyright holders, online content creators, content consumers. However, technologies and websites that facilitate creation and sharing are also part of this environment and should be considering these issues in terms of both usability and design. It is important, then, for designers and researchers in the CSCW community to have some understanding of copyright law as well. As Jackson et al. point on in their discussion of the role of policy in CSCW systems, it should not be the case that consideration of policy comes only after design and practice [20]. Copyright policy is deeply intertwined with any kind of creative activity, especially in the context of sharing and collaboration. This study reveals that it is an important aspect of interactions between creators in these online communities, and therefore should be an important part of the user model in design decisions. We should not only be thinking of ways to help creators better understand copyright, but also considering the implications of the ways they currently understand it as well.
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REFERENCES


