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The purpose of this research is to gain a greater understanding of the factors that influence library and information science (LIS) students' views on intellectual property rights, specifically illegal reuse of content on the web. The study utilizes interviews and surveys to explore attitudes toward illegal downloading of digital content in general, extent of ethics education in LIS classes, disciplinary differences between information and library science, and these variables' influence on attitudes towards illegal reuse of copyrighted content analyzed for correlation. The end result of this study is an exploration of the attitudes about intellectual property rights in the next generation of librarians to determine future areas of improvement (e.g., required ethics trainings for future librarians and information science workers; specific ways LIS programs can emphasize intellectual property concerns).

Headings:

Intellectual Property

Librarians -- Professional Ethics

Piracy (Copyright)

Copyright

Internet Piracy

Library Science -- Moral & ethical aspects

LIBRARY AND INFORMATION SCIENCE STUDENTS' ETHICS TRAINING
AND ATTITUDES ABOUT INTELLECTUAL PROPERTY RIGHTS: AN
EXPLORATORY SURVEY

by
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Background Statement

“Between Big Media interests and the growing supporters of open access stands the librarian, who must engage and negotiate with them both. To the side in the shadows is a third figure, who like the librarian also delivers information to the public without charge at the point of delivery. This much misunderstood figure lives outside the law and with a price on his head. Yet this robber, this “pirate” is closer to the open access-supporting librarian in spirit than one might, at first, think. Both are agents of liberation.” (Donabedian & Carey, 2011)

Copyright infringement and its associated topics are a source of national debate in the United States and across the globe. While lawmakers and content providers work to update preventative laws & policies, illegal downloading of pirated materials nonetheless accounts for almost 24% of all global internet traffic (Pease & Price, 2011).

Users take extraordinary risks when they illegally download and distribute materials. Since 1998, the Digital Millennium Copyright Act (DMCA) has included controversial enforcement provisions. In *Copyright Law and the Digital Millennium Copyright Act: Do the Penalties Fit the Crime?*, Clark (2006) outlines the legal controversy surrounding the DMCA. For content providers, a delicate balance exists between copyright enforcement and attempting not to alienate potential customers. Clark addresses the factors which contribute to the deterrence effectiveness of criminal penalties under the DMCA, an understanding of which is necessary for a discussion of users’ attitudes.

A first-time violation of the DMCA carries fines of up to \$500,000 and a sentence of up to five years in prison for the first offense (Clark). One interesting question about

intellectual property online is whether users would take such extreme risks to download content if they are aware of these risks, and of the public domain and restriction-free resources available to them should they seek it. There are many forms of digital materials which may be downloaded and reused without violating copyright laws, including videos, software programs, eBooks, and music. One of the many roles of librarians in the digital age should be able to help their patrons find and access these materials; but how prepared are they to address these concerns ethically?

Library and Information Science (LIS) students are exposed to abundant free, legal resources during their education. They are particularly aware of the abundance of resources available without restriction at their local libraries and online, and of the issues surrounding intellectual property rights. They are an ideal population to study in terms of attitudes towards legal and illegal content retrieval and repurposing.

We must also ask whether future generations of librarians are given the resources needed to balance the rights of copyright holders and the needs of the populations they serve, so this study aims to briefly address levels of ethics training reported by current LIS students. Another area of study is to consider whether the information science and the library science curricula differ in terms of ethical considerations taught, and whether this impacts attitudes towards intellectual property rights.

Purpose

The purpose of this research is to gain a greater understanding of the attitudes of University of North Carolina LIS students about intellectual property rights, and how this correlates with aspects of the information and library sciences curriculum. My research looks at this from three angles: general attitudes towards illegal content reuse; presence of ethics training; and whether students are enrolled in an information science or library science program of study.

More information about LIS students' attitudes towards illegal downloading is needed to determine whether copyright ethics issues are adequately addressed in the LIS curriculum. It is also worthwhile to see whether information or library science students' attitudes differ, since there are curricular differences between the two programs.

1.1 Research Questions

- **Attitudes:** Do LIS students have defining views about intellectual property rights?
- **Ethics:** Does ethics instruction in the LIS curriculum correlate with harsher views of violations of intellectual property rights?
- **Information versus Library Science:** Are these attitudes common to library and information science students, or does one group differ significantly?

Literature Review

Intellectual property rights are of concern to librarians and LIS students adhering to a code of ethics. The Code of Ethics of the American Library Association (American Library Association, 2008) specifically includes a provision that “We respect intellectual property rights and advocate balance between the interests of information users and rights holders.”

According to Smith (2009), ethical issues are a core concern of the library and information science instruction, with broad integration across the curriculum. The ethics curriculum is monitored in the ALA accreditation process, and has been supported in position papers by library instructors. Almost half of the core course descriptions Smith analyzed contained “ethics-specific learning objectives.” Codes of ethics, in fact, were the most consistently used learning resource across all core LIS classes. However, during Smith’s interviews with distinguished LIS administrators, concerns emerged. Instructors reported feeling challenged by the task of training their students in LIS ethics, because they themselves were not specifically trained in ethics and suffered from a lack of available ethics teaching materials.

Gopal (2004) relates a general model of ethical behavior to illegal downloading. His findings indicate that an ethical model of illegal downloading is applicable to illegal software and audio downloads alike. Gopal presents a structural equation model which relates several variables to an overall ethical model of illegal downloading practices. These variables include “club size” (perceived peer group engaged in similar activities),

individuals' ethical index (asking ethical questions not related to illegal downloads and subsequently rating participants' responses), their levels of deontological and utilitarian beliefs (by asking about attitudes towards laws and the justice system), and the estimated economic benefit (i.e., money saved) by downloading illegally instead of purchasing. Gopal's equation relates these factors together to predict an individual's likelihood of self-reporting illegal downloading and file sharing behaviors.

Hinduja (2003) surveyed attitudes about illegal downloading and discovered several reasons why participants were likely to consider violations of intellectual property rights acceptable. Common rationalizations for engaging in this particular type of illegal activity included how downloaders neutralize their responsibility by blaming high prices of software for inducing them to pirate, using the perceived 'greed' of rights holders as a justification of subversion of ethical practices. This may point to a need for survey questions about attitudes towards rights holders. Hinduja also found that the low likelihood of being caught while engaging in illegal downloading contributes to the perception that illegal downloading is an acceptable practice. 51.3% of all respondents in his study did not regard illegal downloading as "improper or intrinsically wrong."

In conducting interviews about illegal behaviors, it's necessary to be realistic about both the possibility of underreporting and the ethics involved with asking research participants to admit to actions which may have harmful repercussions. Taylor's (2012) research may point to a better way to assess the practices of illegal downloading among LIS students. Taylor's findings indicate that measurements of desire to engage in the practice of illegal downloading may be more predictive of actual illegal downloading behavior than self-reports of behavior. It is therefore at least as important to measure

attitudes about intellectual property rights among LIS students as behaviors. A survey about beliefs may be just as revealing as a survey about practices.

One metric which has proven effective in measuring *attitudes* about illegal downloading is Burgess' (1999) detailed 30-item survey instrument. Burgess' survey was originally designed to survey owners of fan sites of Dilbert, The Simpsons, and Star Trek who displayed copyrighted material on their websites without permission; however, the survey is useful in its study of attitudes, and thus this research utilizes it extensively in the developed survey instrument.

Other researchers who have studied attitudes about intellectual property rights include Siegfried (2004). Hinduja (2001), on the other hand, details *behavioral* survey questions to determine frequency, types of media downloaded, recency, and proportion of all owned media that was illegally obtained. His survey of college students at a large Midwestern university found that broadband connectivity increases the likelihood of illegal downloading.

Konstantakis et al.'s (2009) paper on the illegal downloading practices of computer science students gives a fascinating exploration of this topic in a discipline related to information science. The article explores the influence of social norms and finds that the lack thereof in the digital environment leads to a culture more accepting of behavior deviating from a legal consensus. Economic factors also influence computer science students' attitudes towards intellectual property rights, particularly the dearth of freely available software licenses in the academic environment. This paper suggests that cost and personal beliefs are the main triggers for pirating behavior in computer science students. A similar methodology may bring to light similar or different findings for LIS

students, who might be more or less aware of legal resources available through the libraries and the ethical issues related to intellectual property rights.

Of course, library and information science students may differ in their attitudes, due to a number of differences between the fields. Saracevic (1991) notes that information & library science are both concerned with the social and humanistic role of technology, but the differences between them include (1) selection of problems & the way they're defined; (2) theoretical questions asked & frameworks established; (3) nature/degree of experimentation and empirical development alongside knowledges/competencies derived; (4) tools/approaches used; and (5) the nature/strength of interdisciplinary relations.

Hinduja's (2003) aforementioned survey of a randomized sample of classes at a large Midwestern university found that the higher the skill at Internet-related activities, the more likely students are to engage in illegal downloading. Since information science is "inexorably linked to information technology" according to Saracevic (1991), students studying this discipline may demonstrate advanced skills which may affect their attitudes towards illegal downloading. Hinduja also found that those with a higher variety of internet resource usage tend to download illegally more frequently; other earlier studies, such as Christoph et al. (1987) and Kini et al. (2000) contradict these findings. Exploring possible attitudinal differences between information science students and library science students may help to elucidate this contentious subject.

Research Design

Since this is an exploratory project, a qualitative method is necessary. The research engages with the social constructivist worldview, in which meanings are constructed as humans engage with the world within the context of social and historical perspective (Creswell, 2009). A quantitative component is also appropriate for further information about a student's program and ethics training, thus creating a mixed methods research design.

The topics studied include perceived ethics training in LIS programs, attitudes about illegal downloading, and demographics on program of study (library or information science).

1.2 Research Methods

The research is both observational and correlational in nature, exploring the complex interactions between information vs. library science education, ethics training, and attitudes about intellectual property rights. There are both an individual interview and a survey component.

The survey includes fields for choices between information and library science enrollment, multi-select questions about attitudes towards intellectual property rights and ethics training, and free text boxes for qualitative responses for the attitudes and specific courses being studied.

The researcher developed a set of individual interview questions and a survey instrument based off of Burgess' (1999). The researcher spoke with the instructor of the Information Ethics course (INLS 584; taught by Dr. Barbara Wildemuth) at the University of North Carolina at Chapel Hill about administering a survey to students who have taken this class at the UNC School of Information and Library Science.

1.3 Data Collection Methods

For this research, both individual interviews and a survey containing open-ended questions were appropriate. Focus groups were considered, but ultimately deemed too public a venue for collecting potentially controversial views. Brief surveys were emailed out to all UNC School of Information and Library Science students, and to students who participated in the Fall 2013 Information Ethics course at UNC. The survey utilizes the existing survey instrument developed by Burgess. The individual interview questions are likewise modeled from Burgess. The survey was approved for administration by UNC's Institutional Review Board, then Dr. Wildemuth agreed to email the survey to the students from this most recent Information Ethics class.

Individual interviews were also conducted with both information and library science students at UNC, including one who had taken Dr. Barbara Wildemuth's Information Ethics class. The number of students willing to be interviewed determined the sample size, three interviews. This number is too small to convey demographic information in a representative way. The interviews were more concerned with identifying themes, rather than correlating particular attitudes with demographic information.

1.4 Analysis Methods

My analysis attempted to correlate 3 variables: attitudes about illegal downloading, presence of ethics training in LIS curriculum, and whether the student is enrolled in either a library or information science program. There was also a qualitative component, especially for the questions about attitudes, in which the researcher identifies themes which emerged many times within the interviews and also analyze open-ended survey results for common themes. To this researcher's knowledge, no research had yet been conducted on LIS attitudes towards intellectual property rights at the time of submission, so presenting these exploratory findings involved coding for themes, and subsequent analysis of the most prevalent attitudes.

Since the division between library and information science question and ethics questions can be easily quantified, these questions are multiple-choice, and attitudinal questions are often asked using multiple-selection, multiple choice questions. Since this is difficult to accurately correlate person-by-person with themes derived from the individual interviews, some of Burgess' (1999) survey questions were included and used for the qualitative individual interview analysis.

Benefits

Several benefits accrue from this research. One obvious benefit is the expansion of the literature about LIS students' attitudes towards intellectual property rights. Another is the extent to which ethics training may influence LIS attitudes towards intellectual property rights. This question is particularly interesting, because the ALA does not currently require an explicit ethics course, and the results may show support for increased ethics training in the LIS curriculum. A third benefit is the opportunity to observe possible differences between the attitudes of library science students and information science students; any differences between ethics training received as part of the information science curriculum and as part of the library science curriculum may show whether current levels of ethics training are more adequate in one group compared to the other.

Limitations

Naturally, there are limitations to the proposed study. The biggest limitation is the small size of the potential sample of LIS students at UNC-Chapel Hill; however, securing a larger sample size to improve the robustness of results has proved difficult at other institutions of higher education.

One way to overcome this obstacle would be to contact LIS programs around the state of North Carolina and request that they distribute the survey. There are several drawbacks to expanding the sample in this way. One drawback of this method is that many programs do not distinguish between an Information Science degree and a Library Science degree. Another is that the titles of ethics classes vary by institution, so modifying the phrasing of the questions to be more robust is difficult.

Another problem with this sample would be the issue of what to do about the interview samples. Interviewing LIS students, especially those enrolled in online programs, may prove to be exceedingly difficult and may result in the interviews being limited only to students enrolled at UNC-Chapel Hill.

A related limitation is the issue of whether a sample of all NC LIS programs would even be generalizable enough to be of interest to LIS programs outside of North Carolina. Given the variation in LIS programs within North Carolina (from large, research-oriented programs to smaller online degree programs), this sample would be more robust than simply surveying UNC LIS students, yet it still might not reflect potential regional differences in LIS instruction. Although these differences are likely to

be small considering the universality of ALA accreditation requirements, this research may still only appear relevant to some LIS institutions. LIS practitioners outside of an academic context are also excluded, so the research may not appear relevant to practitioners with no academic connection.

Interview Results & Analysis

1.5 Demographic Information

1.5.1 Program Affiliation

Two current students and one former student responded to the email sent out to the UNC School of Information and Library Science student listserv. The two current students interviewed (encoded as P1 and P3) are both Master of Information Science students, and the former student (encoded as P2) graduated from the Master of Library Science program in 2012. Additionally, one of the student respondents (P3) is pursuing a dual degree program with the UNC School of Law.

1.5.2 Knowledge of Copyright Law

None of the interviewees expressed great confidence in their knowledge of copyright law as it pertains to intellectual property rights, but all responded that they had some knowledge. When asked to rate her knowledge, P1 responded that she would consider it to be “probably fair to middling.” She elaborated that:

“My first round through college was when Napster was not illegal, so I spent a lot of time downloading things, and then suddenly Napster was illegal and people were, like, ‘You can’t do that anymore!’ So I’m probably the rare person who’s around a college campus today who doesn’t download anything illegal because I remember crackdowns on my college campus where people were, like, ‘You can’t do this, we will kick you off campus if you do this.’ I mean, that’s kind of tangential, but I think probably fair to middling” (P1).

Clearly, at least some information and library science students have become aware of the issues involved with intellectual property rights through coverage by the popular media. P2 described her knowledge base along the lines of, “I feel like I know

how to look up resources about copyright law and who to ask if I wanted to learn more about it, but I don't really know anything about it that much, really." P3 is currently pursuing a dual degree at the School of Law, so the interviewer suggested that he may know more than an average information science student. In response, he stated, "Yes, but I know a lot less than a bad copyright lawyer, which I think is important." Therefore, all information and library science students interviewed were somewhat familiar with intellectual property rights, but none considered themselves an expert.

1.6 Ethics Coursework and Effects

All participants were asked about the ethics-related coursework completed in pursuit of their respective degrees at the School of Information and Library Science. Overall, all participants had received some degree of ethics training, although the effect of this training on their preexisting ideas about intellectual property rights was questionable, with only one out of three agreeing that their opinions had been changed as a result of their coursework.

1.6.1 Information Ethics Course Participation

Only one of the three students and former students took the Information Ethics course offered by the School of Information and Library Science. This respondent reported that this class influenced his opinions about the ethics of intellectual property rights. He explained that the structure of the course is such that students may select a topic of their choice as a focus for a class presentation. He reported that his topic choice involved intellectual property rights, hence a considerable growth in related knowledge. P3 reflected on the nuanced understanding he gained from the Information Ethics class:

"...it's the malleability of copyright law and the untested nature of some parts of it that I think are really interesting.... and you just won't know until either the

legislature acts because of some popular pressure, or until a case gets in front of a judge, and they litigate it out. Otherwise, then what else is the law, except a powerful group using essentially force to just say, 'We're doing this, try to stop us.' And there's no law saying specifically that they can't!" (P3).

P3 additionally reported learning a "good bit" about the open source software

movement, which he connected with the theme of intellectual property rights:

"But whether or not software is a writing (an expression, right?), or an invention is kind of a central problem in software. And definitely a split opinion among people who work on these projects, who work on them presumably for fun, or as part of their job, they've deployed their Linux distribution in their job environment and they maintain it" (P3).

1.6.2 Intellectual Property Ethics Learned in Other Courses

All interviewees stated that they had learned about the ethics of intellectual property rights during their time in the School of Information and Library Science, regardless of whether or not they had taken the Information Ethics course. P1 had also graduated from the undergraduate Bachelors of Information Science program at UNC, and so in addition mentioned several undergraduate-level classes which covered the materials.

"I believe we talked about it in 200 [Retrieving and Analyzing Information, INLS 200]; I think we talked about it in 500 [Human Information Interaction, INLS 500];... the undergraduate Management [Information Use for Organizational Effectiveness, INLS 285]... that one we spent a lot of time talking about that. I feel like we touched on it in my social media special topics [Social Media and Society: Theoretical and Empirical Overview, INLS 690], and we talked about information ethics quite a bit but from a different perspective in the privacy special topics class [Privacy by Design, INLS 490]" (P1).

P2 mentioned a "really helpful" guest lecture by North Carolina State University's Director of Copyright and Digital Scholarship as the primary resource for intellectual property rights education during her career at the School of Information and Library Science. This lecture, in which he "discussed a lot of the details, as much as he

could in one class period, of copyright law” occurred as part of her Collection Development class [Resource Selection and Evaluation, INLS 513].

P3 viewed Reference [Information Resources and Services, INLS 501] as the primary course where intellectual property rights were covered:

“...we talked a little bit about when giving advice might be problematic in an intellectual property context. You know, do you *have* to instruct people about the rules of copying? I don’t know. When you tell them where the copy machine is, do you have to hand them a copy of the code, too?” (P3).

However, when asked whether the class presented students with a possible resolution to that question, P3 responded, “No, I don’t think so. It was, maybe, talk to your supervisor. Not sure they would know, but... [trails off].” Although these courses all appear to give a cursory nod to educating students about the ethics of intellectual property rights, unanswered questions remain.

1.6.3 Opinions Changed by Other Courses

Although all interviewees took courses which covered intellectual property rights during their time at the School of Information and Library Science, only one mentioned any change in their opinions about intellectual property rights as a result. P2 reported that her opinions changed, saying that as a result of taking the class, “I think I have a little bit more of an understanding of what would constitute fair use, or what could be more easily argued as fair use.” P1 answered that her opinions hadn’t changed much, but it wasn’t because of a lack of information presented in her classes:

“I think my opinions haven’t changed just because I didn’t have a lot of them to begin with. Not that I’m saying I didn’t have ethics... societally, you’ve got your norms and people will tend to adhere to those, and I just hadn’t ever really thought in depth about them. These classes just kind of filled in the holes within the norms and expectations” (P1).

P3, as a dual degree student studying law as well as information science, appears to have gotten most of his understanding about intellectual property rights from his classes at the School of Law, not from the School of Information and Library Science:

“I mean, if you have a scholarly communications officer who also happens to be a lawyer, go talk to them. That’s just to save your institution’s ass, though. I mean, you don’t actually know anything about the law until it happens, right? Even then, even what your scholarly communications officer with training in the law would tell you, would be his argument or her argument as to what the law is at that particular time. Now, that may be good enough, and it probably should be good enough, for most institutions. We’re in the risk-avoidance business in some way, but... yeah, it’s like you don’t ever really learn the law until it happens. And a lot of these questions, they get surprising answers based on what the political climate is at the time, based on whether the judge had lunch right before he heard your case (not so much that, but a little bit), based on the particular issues that go up on appeal, it’s an interesting process” (P3).

Perhaps because of this preexisting, nuanced perception of how law is argued in court, P3’s views on intellectual property rights were not changed by classes at the School of Information and Library Science.

1.7 General Opinions

Aside from the coursework mentioned above, students were asked several questions about their general attitudes about intellectual property rights.

1.7.1 Who Decides what is Acceptable Conduct?

Another question asked during the interviews dealt with the idea of who should decide what is acceptable conduct on the internet with respect to intellectual property rights. This question, like many others, was based on Burgess’ (1999) survey, and included suggested options such as ‘business/commercial interests,’ ‘the government and the courts,’ ‘internet service providers,’ ‘the people using the web,’ and ‘computer/software manufacturers.’ For the present survey, the option of ‘consortia’ was added to reflect the possibility of more than one answer. Interestingly, there was no

consensus among the interviewees on this question. P1 suggested that “it probably needs to be some very, very large entity with representation from all the different factions,” while P3 suggested that ideally, “No one would be in charge of anything.” He then elaborated:

“...maybe in the new, non-net neutrality world, maybe whatever content provider has some sort of special deal with whoever the ISP is, but what I’m trying to say is, I just think it’s way too complicated to have any one group involved. You said ‘in charge.’ Now, I immediately went to the policing of this. I guess that’s not really what you’re asking. Decide what acceptable conduct is? The people, through their duly elected representatives. Now [laughs], are representatives responsive to the people? No. This is my personal opinion, no. So then maybe some executive branch regulators. I can think of 2 really good organizations, or rather governmental organizations, the FTC [Federal Trade Commission] or the FCC [Federal Communications Commission] could both police this area, or be in charge of deciding, meaning setting the rules for copyright conduct. I don’t know, maybe the Patent and Trademark Office, or the Copyright Office out of the Library of Congress” (P3).

P3 expressed doubt about the effectiveness of legislative solutions, and therefore would prefer that no one truly be in charge of deciding what is acceptable conduct with regards to intellectual property rights on the internet. P2 would ideally put more faith in a legislative solution, but there are caveats:

“I guess it probably should just be decided on precedent. The web environment is so young that there isn’t much precedent to draw from. In some cases, I think it should be hardware or software developers, the companies that do the development, just because it is their property, and they’re the ones who invested the resources in making it exist. But I also think the people on the web are doing all of the deciding about how it’s being done, regardless of what any company would like to dictate, so it’s hard to say who should have the main authority” (P2).

P2 supports the idea of decisions based on precedent in theory, but acknowledged that there is little precedent to draw from, since the capacity to share files on the internet is fairly new. She acknowledges both the rights of intellectual property rights holders, but

also the independent decision-making process of web users. This issue remains complicated, and no definitive viewpoint emerged among interviewees.

1.7.2 Who Benefits from Copyright?

All interview participants expressed concern over the content producer's role in the overall architecture of intellectual property rights. While intellectual property rights exist "to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries," participants expressed skepticism about how or whether the rights secured to authors and inventors ensure them equitable financial compensation for their work (U.S. Const. art. I, § 8). When asked about who benefits from copyright laws, two of the three interview participants made a distinction between the rights holder and the content creator. P3 stated, "Who benefits from copyright laws? The rights holder. Which is not to say the creator. I think that's a really important distinction. The rights holder benefits from copyright."

P1 gave the example of comic book artists:

"...the people who hold the copyright aren't necessarily the people who created the content. There are some really great examples of that in the comic book world. Back in the day, the people who used to draw for Marvel and come up with the storylines and who created these great characters who now are making billions and billions of dollars at the movies, the people who created them don't actually own them because Marvel owns the copyright. So yeah, I think it's kind of a glib answer, but it's whoever holds the copyright is the one who benefits from it, and that's not always the person who should be benefitting from it" (P1).

Not only is a distinction made between the copyright holders and the content creators, but also a judgment about who *should* be benefitting from copyright protections.

P2 was not as certain as the other respondents about who does benefit from copyright law, but did acknowledge that benefits are intended to accrue to content creators:

“I guess I’m not really sure [who benefits from copyright laws]. I mean that it’s an important concept, but I can’t think of anyone off the top of my head who would directly benefit from it. I guess maybe authors or musical artists. I mean, that’s who it’s designed to benefit, but I don’t really know how it specifically benefits any of those groups” (P2).

Clearly, there is skepticism about whether and how copyright laws serve their intended purpose for content creators; this may be unsurprising, considering the complicated contractual structures binding creators to publishing industries and the ‘works made for hire’ provisions of the Copyright Act of 1976 (see Hamilton, 1987 for additional information). Indeed, P1 mentions the phenomenon of works made for hire, although not by name:

“No, I would argue that it’s probably hardly ever the creator, you don’t see the person who drew Snow White saying, ‘Look at all this money that I’m making off of Snow White’s image,’ but, you know, Disney makes that money because they commissioned it” (P1).

In addition, current information and library science students’ living memory also includes the 1998 Sonny Bono Act and its appeal, the *Eldrid vs. Ashcroft* case. In this case, the Supreme Court decided in favor of the Act, a law calling for the extension of copyright by an additional twenty years. This act extended copyright protections for works-for-hire to 95 years from the date of first publication, or 120 years from creation, as well as extending creator-owned copyrights by 20 years to 70 years after the creator’s death. Fifteen library associations filed an amicus brief denouncing such an extension, including the American Library Association, the American Association of Law Libraries, and the Association of Research Libraries. After the decision in favor of the Act, the *New York Times* published an editorial stating that “In effect, the Supreme Court’s decision makes it likely that we are seeing the beginning of the end of public domain and the birth of copyright perpetuity. Public domain has been a grand experiment, one that should not

be allowed to die” (The Coming of Copyright Perpetuity, 2003). Strong criticism like this was typical in the news media of the day. Interestingly, the information science students in this sample questioned the distribution of benefits from copyright laws more strongly than the library science student. Perhaps they are more aware of the ‘works made for hire’ stipulation as persons more involved with writing code as part of their employment, or perhaps the significance of the case has become more obscure in the field of library science in the decade that has passed since the ruling.

1.7.3 Unfair Limitations on Access to Media

When asked whether or not participants felt that current copyright laws unfairly limit access to media, respondents’ answers reflect the complicated nature of issues of access and the idea of fairness. P1 considers commodification as the root cause of what she perceives as unfair access to media:

“I don’t necessarily think the copyright laws are what unfairly limits things, I think it’s the companies that control said copyright. You know, people can create art... and they should be free to distribute it however they wish. However, when you bring in the corporations... it’s all of a sudden, like, ‘OK, well we’re selling this,’ so it’s a commodity—once you commodify something like art or creation, you get into this whole different kind of level, and I think that’s where the issues are” (P1).

P2 did not mention a strong opinion about the ‘fairness’ aspect of access to media, but sees attempts at limiting unauthorized access to media as ultimately futile:

“People are just going to do what they want on the web anyway, so even if the point of copyright law is to limit people’s access to something, if people have the means of downloading something easily, even if it may be illegally, I don’t think that copyright law is stopping anybody” (P2).

P3 again brought up the issue of whether the rights holder is the content creator in his response. At first, he considers that unfairness may be determined by whether the content creator is the one benefitting from any access limitations, saying, “I’m going to

say yes and no. Yes, again, depending on the rights holder. If the rights holder is the artist, no” (P3). Then, he changes his mind and qualifies this with additional criteria about what would constitute fair access:

“Actually, yes. Still, the terms would have to be more reasonable, actually, the copyright term, the longevity of it... No, not life plus 70. Maybe something like for a patent, a patent is 14 years. OK. I’m OK with that. Then you have to create something else after 14 years, if you’re an artist” (P3).

This argument mirrors the debate mentioned earlier about copyright term extension. The prevailing attitude seems to be that content creators should benefit from their work, but that a copyright term extending outside of the limits of the person’s lifetime is unjustifiable when compared to the public good of making the work freely available.

1.7.4 Tension with Libraries

One interesting question explored in the interviews dealt with the possibility of tension between the mission of libraries, as a place where intellectual property is distributed free of charge, and intellectual property rights, which seek monetary compensation for the creators of this property. All interviewees acknowledged that there is some tension, although P1 believes that this tension would be unnecessary in an ideal world:

“I think that in a vacuum or in a perfect world, no, because technically copyrights don’t apply when being used for educational purposes, and I think by definition anything a library does is for educational purposes. I think that it depends on how much a librarian or staff or whatever is willing to toe that line, and I know when money starts getting thrown around, people become a lot more conservative” (P1).

P2 agreed, stating:

“I think there is, because what immediately comes to mind is the tantrum that Philip Pullman threw a year or two ago about how libraries let all these people

have these books for free, and how that totally screws over authors like him, and yeah, so that's clearly a point of tension. He's a very popular author, and I personally thought his fit was ridiculous, but that's a good example of some tension. I think many authors are in the library camp, they just want access, and my personal opinion would be that the access that libraries provide will lead to revenue for the authors, and exposure and stuff. But I think there's some tension" (P2).

P2 verbalized the very root of economic tension between libraries and rights holders. Libraries purchase their holdings, and then provide patrons free access by right of the First Sale Doctrine, which grants a purchaser "the right to sell, display or otherwise dispose of *that particular copy*" (U.S. Attorneys' Manual). The repeated loaning of these authors' works may arguably deprive the authors of the profits attached to book sales if each individual borrower had purchased the book. Yet at the same time, libraries present both the opportunity for greater audience exposure through checkouts, and also access to materials which authors themselves may use as sources of inspiration for their work.

P3 cleverly demonstrated his perception of the tension between libraries and rights holders with a thought experiment he has conducted with others:

"Well, as I am fond of saying to my friends... they have this really crazy place where they don't charge you any fees, but you can get pretty much any movie you want, and any book that you want, and you can take them and keep them for a while, and use them, and stuff. And they're like, 'Oh, wow, what is that thing?' And I'm like, 'It's a library, hey! Joke's on you!'" (P3).

Presumably, the very idea of library services seems too good to be true to the incredulous friends of P3. Indeed, for P3, the tension between libraries and rights holders goes so deep that he wonders if libraries could even exist if they weren't already deeply engrained in our culture:

"If the world started again today, would we ever see a library? Hell no. Right? Why would a rights holder ever say, 'Oh yes, you can purchase this thing, and then give it to anyone you want.' What?? I don't care what you are, I don't care that you're a public entity... pay up or don't exist!... You wouldn't have a library.

And I think that the only benefit that I can see for rights holders to keep playing in the library game is the fact that there are still libraries and people in them who may say something about this, or may not. You see stuff like the exploding eBook, the eBook that goes away after 26 uses, which I don't think actually became a thing, because there was outcry" (P3).

The "exploding eBook" P3 mentions refers to the HarperCollins' self-destructing eBooks policy which began in 2011. After 26 uses, the license for the eBook must either be re-purchased, or the book will become inoperable (Bonfield, 2013). Although there was, indeed, outcry and a boycott, P3 was incorrect in stating that this policy never went into practice. HarperCollins continues to use this model, and the boycott ended unsuccessfully in 2013. Moreover, this model renders one of libraries' core undertakings impossible: that of preservation. Klinefelter (2001) describes this function as "an important traditional role." However, when libraries must license content that will disappear after a certain amount of uses, they are incapable of keeping a written record of human artistic and scientific endeavors available for posterity. Klinefelter (2001) goes on to mention that "...overall, publishers have not been interested in taking over the archiving role that libraries have traditionally assumed." This important cultural heritage could be lost if rights holders are unwilling to archive, and libraries unable.

The "exploding eBook" only lends more credence to the supposition that there is tension between libraries and rights holders. Although vendors base licensing policies on the average number of times a book is checked out before it needs to be replaced, the LIS community has been very critical of this business model. Cory Doctorow, a journalist and science fiction writer, made the argument that "it's bizarre to argue that this finite durability is a feature that we should carefully import into new media" (Doctorow, 2011). For Doctorow, P3, and others, new formats merely represent the latest battleground in an

ongoing war between rights holders and libraries. P3 believes that this tension may be unresolvable, and that libraries may be on the losing end of the war:

“Maybe we are done with libraries. Maybe we just don’t care about poor people. Or maybe we just don’t care about free access. I think that that’s actually, yes, in some ways an ethical discussion to have society-wide, but will be determined by a political discussion. We cut things like food stamps and women and children benefits... Do we need a library if we’re going to let people starve?” (P3).

Public libraries exist to educate the population they serve, regardless of whether that public can afford to purchase the books the library circulates. Yet, as public institutions, they are subject to the whims of the political and economic climate. Rights holders are therefore not the only source of tension for libraries; the very governmental bodies which allocate their funding are also perceived as a source of tension. This tension does also relate to rights holders, in that rights holders determine the costs of the media for which libraries must budget.

1.8 Other Emergent Themes

Three themes emerged over the course of the interviews which were not specifically mentioned in the questions, but were common to all responses. The discussion above (in *Who benefits from copyright laws?* and *Unfair Limitations on Access to Media*) about the role of content producers represents one emergent theme; the other identified themes are concerns about fair use, and recognition of power struggles between different actors in the intellectual property rights debate.

1.8.1 Fair Use

All interviewees reported concern about the doctrine of fair use. P2 mentioned in another part of the interview that, “...for the most part, educational purposes is a really easy argument to make.” Their responses when asked whether they believed there was

tension between the mission of libraries and the role of copyright law likewise indicate strong support for fair use.

P1 makes the interesting point that monetary considerations may influence libraries' interpretation of the doctrine of fair use, and cause them to err on the side of caution. She mentioned the possibility of a rights holder telling a library, "I'm going to sue you.' And that would scare anyone, let alone a publically funded entity. So I feel like there shouldn't be a tension, and in a perfect world there wouldn't be, but I think when you add money to anything, there always is" (P1). Klinefelter (2001) notes that "risk-adverse libraries are unlikely to challenge" publisher-authored licenses; students are aware of this less-than-litigious tendency among libraries.

P3's answer to the question about who should decide what is acceptable conduct on the internet in terms of copyright law contained an analysis of the differences between real property rights and intellectual property rights, in which he argued that real property rights are much less restrictive than intellectual property rights:

"...think about eminent domain. The government can just come and say, 'Uhh, we're building a road here. Sorry, I know you own this, but really, everything actually kinda belongs to the state, really, we're just kinda letting you 'own' it, quote unquote own it, but now we're going to drive a road through it, so, uh, here, you get paid whatever the minimal amount is, and piss off.' Government can't do that with—there's no copyright eminent domain. But there is fair use" (P3).

P3 positions fair use as one of the only cases in which the public interest takes on more importance than the private interests of rights holders.

1.8.2 Power Structures

This balance of power between rights holders and other interested parties was another theme constant between all interviewees. P1 mentioned above that the power balance between moneyed interests of copyright holders and the publically funded

libraries is complicated and often leads libraries to urge conservatism when issues of fair use arise, and that the creators of works made for hire are not compensated in the same way as a rights holder. P1 also responded to the question about who should decide what is acceptable conduct in terms of copyrighted material with a traditional quotation about power: “I don’t think there’s any one person or group of people who should have that much power... absolute power corrupts absolutely, and that’s a lot of power to hand to one person or organization or entity” (P1).

P2 was interested by the relationship between rights holders and the fan communities surrounding television shows. Crafty fans of the television show *Firefly* began to knit copies of a hat worn by a beloved character, Jayne Cobb, after the show was cancelled abruptly during its first season. A decade later, the Fox Corporation, which holds the rights to *Firefly*, produced its own version of the hat, and sent out cease and desist letters to fans selling the hats on the craft site Etsy (Pantozzi, 2013). P2 felt strongly that this move was unjustified:

“...so they have a registered trademark Jayne Cobb hat now that you can buy... but they totally persecuted tons of Etsy sellers who made Jayne Cobb hats before there was a copyright/trademark Jayne Cobb hat. And I think that’s such a bully move. I made one for my brother, you know?... And I guess they’re profiting from it because it’s on Etsy, but they were creating a market where there wasn’t one, and their work is what determined that there could be one. So it’s really bullshit that they were ordered to cease and desist” (P2).

This quote reveals an interest in the power dynamics behind intellectual property rights. P2 makes the point that without the show’s legendary cult following, there would be little in the way of merchandising opportunities a decade later. Clearly, a market existed for this product based on this interest. Yet, Fox did not offer the product, so fans created an alternate economy to meet other fans’ demand for it. The power dynamics of

intellectual property rights are curious, in that rights holders sometimes end up battling the very market segment they hope to reach.

P3 also spoke about power dynamics in his response about the tensions between rights holders and libraries. He went on to describe the balance of power in explicit terms:

“I’m not sure where libraries get their bargaining power from. There are so many other different distribution channels, especially to rich people or not-poor people, right, because even lower-middle class people will have cable and go to a food bank. So yeah, maybe the only hope for bargaining power that libraries would have is that communities would have some interest in providing copyrighted content to communities that they represent, and that communities would actually know about what their library does and is” (P3).

This idea seems to introduce a new power dynamic, that between rights holders and the communities served by libraries.

Overall, there appears to be some skepticism among current LIS students about the balance of power between:

- Rights holders and creators
- Rights holders and libraries
- Rights holders and communities served by libraries
- Rights holders and fans of the copyrighted works

Judging by the interview subjects studied here, LIS students appear to recognize many power struggles between the stakeholders involved with the intellectual property rights debate today.

Survey Results

1.9 Demographic Information

1.9.1 Program Information

Initially, the survey received 30 responses. However, three students dropped out of the survey after providing demographic information, leaving 27 respondents for the majority of the survey; 3 more students dropped out of the survey by the end, leaving 24 respondents for some questions. Because of this, the number of respondents is listed next to each percentage in this section. Respondents to the survey were overwhelmingly Masters students (70%; 19 responses), while PhD students and undergraduates were represented sparsely (19% and 11%, respectively).

The survey design produced two unexpected limitations. UNC's School of Information and Library Science offers a Master of Information Science, a Master of Library Science, a Bachelor of Information Science, and a PhD of Information and Library Science. Accordingly, the poll listed three disciplinary options: Information Science, Library Science, and Information and Library Science. Unfortunately, this caused confusion on the form, and more students chose Information and Library Science (30%, or 8 responses) than would be possible, given that only five students identified themselves as seeking doctoral degrees. These three 'impossible' responses represent 11% of total responses, so these students could not be included in the analysis of information vs. library science. That being said, most students did identify themselves in

a logical way; 33% (9 responses) self-identified as information science students, and 37% (10 responses) as library science students.

The other unexpected limitation was that there were no options for selecting dual degree programs. The dual degree programs offered at UNC's School of Information and Library Science include a Master of Science in Library Science/Juris Doctor (MSLS/JD) and a Master of Science in Information Science/Juris Doctor (MSIS/JD). The presence of these dual degree programs means that this could be an unmeasured variable in this study. Courses in the UNC School of Law such as Copyright Law, Intellectual Property Law, and Constitutional Law would give students additional background knowledge of intellectual property rights, and could possibly skew the survey in unanticipated ways. Since no identifying data was collected, follow-up to determine whether dual degree students participated in the survey is impossible.

1.10 Knowledge of Copyright Law

1.10.1 General Results

Another area studied was how students rate their knowledge of copyright. Unsurprisingly, no student self-identified as an 'expert;' the most common response was 'pretty knowledgeable' (54%, or 13 responses), but 'don't know much' was almost as common at 42% (10 respondents). Only one student selected that they 'don't know anything about it' (4%).

1.10.2 Information Science vs. Library Science Program

Library science students and information science students' responses were very similar for this question; library science students showed a 60-40 split between 'pretty knowledgeable' and 'don't know much' (6 respondents and 4 respondents, respectively),

while 57% of information science students rated themselves as ‘pretty knowledgeable’ (4 responses) and 43% (3 responses) selected that they ‘don’t know much.’

1.10.3 Information Ethics Training

Half of former Information Ethics students responding at this point in the survey (1 respondent) considered themselves ‘pretty knowledgeable’ about copyright law, and the other half responded that they ‘don’t know much’ about copyright law. This is comparable to the 55% (12 respondents) of other students self-described as ‘pretty knowledgeable’ and the 41% (9 respondents) responding that they ‘don’t know much.’ No former Information Ethics students selected ‘don’t know anything about it,’ while one other student (5%) did. These results appear to be very similar.

1.11 Ethics Coursework and Effects

1.11.1 Information Ethics Course Participation

Three students out of 27 (11% of total responses) had so far taken the Information Ethics class as one of their elective courses. One respondent in the Library Science program (out of ten) and one respondent in the Information Science program (out of nine) responded that they had taken the Information Ethics class. The other response selected Information and Library Science. Two of these students reported enrollment in a masters degree program, while one reported pursuit of an undergraduate level program.

1.12 Intellectual Property Ethics Learned in Other Courses

1.12.1 General Results

One question asked how often students had learned about ethical concerns related to intellectual property rights as part of their coursework at the School of Information and Library Science. An overwhelming 74% (20 responses) reported that they ‘Sometimes’

had learned about ethical concerns related to intellectual property rights, while 15% (4 responses) reported 'Never;' 7% (2 respondents) reported 'Often;' and 4% (1 respondent) reported that they were unsure. A follow-up question asked which courses had covered this material; responses are tallied in Table 1.

Table 1: Courses mentioned by students in the UNC School of Information and Library Science which cover ethical concerns related to intellectual property rights vs. number of mentions	
# of mentions by students	Course name and number
3	Introduction to Archives and Records Management (INLS 556)
3	Legal Issues for Librarians (INLS 787)
2	Information Ethics (INLS 584)
2	Special Libraries and Knowledge Management (INLS 747)
2	Electronic Records Management (INLS 525)
2	Research Issues and Questions (INLS 881)
2	Resource Selection and Evaluation (INLS 513)
2	Retrieving and Analyzing Information (INLS 200)
1	Science Librarianship (INLS 690)
1	Data Curation and Management (INLS 756)
1	Programming for Information Professionals (INLS 560)
1	Research Methods Overview (INLS 581)
1	Tools for Information Literacy (INLS 261)
1	Foundations of Information Science (INLS 101)
1	Retrieving and Analyzing Information (INLS 200)
1	Information Use for Organizational Effectiveness (INLS 285)
1	Information Resources and Services (INLS 501)
1	Principles and Practices of Archival Description (INLS 757)
1	Digital Preservation and Access (INLS 752)
1	Human Information Interactions (INLS 500)
1	Music Librarianship (INLS 746)
1	Curriculum Issues and the School Librarian (INLS 745)
1	Youth and Technology in Libraries (INLS 534)
1	Research Methods (INLS 780)
1	Digital Forensics for the Curation of Digital Collections (INLS 890)
1	Law Libraries and Legal Information (INLS 708)
1	Metadata Architectures and Applications (INLS 720)
1	Government Documents (INLS 707)
1	Information Science Capstone (INLS 697)
1	Research Issues and Questions II (INLS 882)

1.12.2 Information Science vs. Library Science Program

Among information science students, 11% (1 respondent) reported 'Never' having learned about ethical concerns related to intellectual property rights in their classes at SILS, while the vast majority at 89% (8 respondents) reported that they 'Sometimes' learned about it in their classes. No information science students reported 'Often' learning about the ethics of intellectual property rights in their SILS classes.

Among library science students, results were similar; the majority at 70% (7 respondents) learned about intellectual property ethics 'Sometimes,' 10% (1 respondent) learned about these concerns 'Often,' and 20% (2 respondents) reported 'Never' learning about these concerns. No respondents chose 'Not Sure' in this demographic. This may indicate that information science students are slightly more likely than library science students to have never learned about intellectual property ethics, while library science students are more likely than information science student to have learned about intellectual property ethics often. There is no overlap between the courses in which information science students and library science students learned about intellectual property ethics; see Tables 2 and 3 for a detailed breakdown.

Table 2: Courses mentioned by information science students in the UNC School of Information and Library Science which cover ethical concerns related to intellectual property rights vs. number of mentions	
# of mentions by students	Course name and number
2	Retrieving and Analyzing Information (INLS 200)
1	Research Methods Overview (INLS 581)
1	Tools for Information Literacy (INLS 261)
1	Foundations of Information Science (INLS 101)
1	Programming for Information Professionals (INLS 560)
1	Information Use for Organizational Effectiveness (INLS 285)
1	Special Libraries and Knowledge Management (INLS 747)
1	Music Librarianship (INLS 746)
1	Research Methods (INLS 780)
1	Digital Forensics for the Curation of Digital Collections (INLS 890)
1	Information Science Capstone (INLS 697)
1	Research Issues and Questions (INLS 881)
1	Research Issues and Questions II (INLS 882)

Table 3: Courses mentioned by library science students in the UNC School of Information and Library Science which cover ethical concerns related to intellectual property rights vs. number of mentions	
# of mentions by students	Course name and number
2	Introduction to Archives and Records Management (INLS 556)
2	Legal Issues for Librarians (INLS 787)
1	Information Ethics (INLS 584)
1	Science Librarianship (INLS 690)
1	Data Curation and Management (INLS 756)
1	Information Resources and Services (INLS 501)
1	Resource Selection and Evaluation (INLS 513)
1	Government Documents (INLS 707)

1.12.3 Information Ethics Training

Students who had taken the Information Ethics course unanimously chose that they ‘sometimes’ learned about ethical concerns related to intellectual property rights in their courses at SILS (3 respondents). This contrasts with students who did not take Information Ethics; 17% of these students (4 respondents) ‘never’ learned about the

ethics of intellectual property rights, 8% (2 responses) covered the subject ‘often,’ 4% were ‘not sure’ (1 response), and the remaining 71% (17 students) chose ‘sometimes.’ Although this may indicate more variability among students not taking Information Ethics, including a population who reports never received ethical training related to intellectual property rights, the sample size of former Information Ethics students is too small to take away definite conclusions.

One former Information Ethics student indicated that the Information Ethics course was the only course which covered intellectual property ethics during their program of study. Other former Information Ethics students indicated that they had learned about the ethics of intellectual property rights from Legal Issues for Librarians (INLS 787), Resource Selection and Evaluation, Foundations of Information Science (INLS 101), Retrieving and Analyzing Information (INLS 200), and Information Use for Organizational Effectiveness (INLS 285).

1.13 Opinions Changed by Coursework

1.13.1 General Results

The majority of respondents (16, or 59%) reported no change in opinion as a result of taking classes within the School of Information and Library Science at UNC. 30% (8 respondents) reported that their opinions had changed ‘somewhat’ as a result of their SILS education, while 3 respondents (11%) were unsure whether their opinions had changed. No respondents selected an unqualified ‘Yes’ to this question. A follow-up question asked which classes changed students’ opinions, if those opinions had changed. Table 4 lists the responses.

Table 4: Courses mentioned by students in the UNC School of Information and Library Science which changed their opinions related to intellectual property rights vs. number of mentions	
# of mentions by students	Course name and number
2	Research Issues and Questions (INLS 881)
2	Legal Issues for Librarians (INLS 787)
1	Information Ethics (INLS 584)
1	Information Resources and Services (INLS 501)
1	Research Issues and Questions II (INLS 882)
1	Law Libraries and Legal Information (INLS 708)
1	Special Libraries and Knowledge Management (INLS 747)
1	Introduction to Archives and Records Management (INLS 556)
1	Resource Selection and Evaluation (INLS 513)
1	Metadata Architecture and Applications (INLS 720)

1.13.2 Information Science vs. Library Science Program

Among students studying Library Science, there was a 50-50 split (5 respondents each) between those who say their opinions changed ‘somewhat’ as a result of taking classes within the SILS program at UNC and those who say their opinions did not change at all. Information science students were more likely to say that their opinions did not change (67%, or 6 respondents), while 22% (2 respondents) replied that their opinions had changed ‘somewhat’ as a result of these classes. One information science respondent (11%) was unsure. Tables 5 and 6 detail the responses by discipline to the follow-up question about which classes changed students’ opinions, if any.

Table 5: Courses mentioned by information science students in the UNC School of Information and Library Science which changed their opinions related to intellectual property rights vs. number of mentions	
# of mentions by students	Course name and number
1	Information Ethics (INLS 584)
1	Research Issues and Questions (INLS 881)
1	Research Issues and Questions (INLS 882)

Table 6: Courses mentioned by library science students in the UNC School of Information and Library Science which changed their opinions related to intellectual property rights vs. number of mentions	
# of mentions by students	Course name and number
2	Legal Issues for Librarians (INLS 787)
1	Resource Selection and Evaluation (INLS 513)
1	Information Resources and Services (INLS 501)

1.13.3 Information Ethics Training

Whether a student has taken the Information Ethics class or not has little bearing on their opinions about intellectual property ethics. 67% (2 respondents) of former Information Ethics students reported no change in their opinions as a result of taking classes within SILS, compared with 58% (14 responses) of other students. The other 33% (1 response) of former Information Ethics students reported that their opinions had changed ‘somewhat,’ which is comparable to the 29% (7 responses) rate of other students. 13% (3 respondents) of other students also selected ‘not sure,’ while no former Information Ethics students selected this response.

In terms of specific classes which changed students’ opinions, the former Information Ethics student with ‘somewhat’ changed attitudes indicated that the Information Ethics course was the only course taken which had affected their opinions about intellectual property rights. All other students indicating a ‘somewhat’ change indicated the courses (apart from Information Ethics, INLS 584) listed above in Table 4.

1.14 Knowledge and Opinions

1.14.1 Primary Purpose of the Web

1.14.1.1 General Results

From this point on, the survey utilized the instrument developed by Burgess for her study about self-reported reasons for copyright infringement on the web (1999). One question sought students' perception of the primary purpose of the worldwide web. The possible responses listed were (a) a medium for advertising and commerce; (b) a forum for exchanging ideas and information; (c) a broadcast medium like television or radio; or (d) other, please explain. A text entry box was included to collect the 'other' responses. Most students (79%; 19 respondents) saw the web as a forum for exchanging ideas and information. 4% (1 respondent) consider the web 'a medium for advertising and commerce,' and one other respondent (4%) saw the web as 'a broadcast medium like television or radio.' 3 respondents (13%) saw the web as something else; two respondents included an explanation: "a place to find information and communicate," and "I see it as all of these."

1.14.1.2 Information Science vs. Library Science Program

All library science students except for one chose 'a forum for exchanging ideas and information;' except for one who chose 'other,' and whose response was listed above: 'a place to find information and communicate.' Information science students also chose 'a forum for exchanging ideas and information' most of the time (5 respondents; 71%), while one other chose 'a broadcast medium like television or radio' (14%), and another chose 'other' without providing an explanation (14%).

1.14.1.3 Information Ethics Training

Students who have taken the Information Ethics course unanimously responded that the primary purpose of the web is as ‘a forum for exchanging ideas and information.’ Other students exhibited more variety, although the majority at 77% (17 respondents) selected the same option as the former Information Ethics students. The next most popular response was the ‘other’ category with 3 responses (14%) providing the extra details listed above (in *a. General Results*), followed by 1 response each (5%) for ‘a broadcast medium like television or radio and ‘a medium for advertising and commerce.’

1.14.2 Purposes of Copyright

1.14.2.1 General Results

When asked about the purposes of copyright, students were given the option to choose from several choices identified by Burgess (1999). These options were ‘to protect the author’s/creator’s financial and intellectual rights;’ ‘to protect the publisher’s financial rights;’ ‘to encourage production of intellectual works for the benefit of society;’ ‘to strike a balance between these rights in order to benefit all concerned;’ and ‘other, please explain.’

Overall, students understood copyright law as having multiple purposes. The most popular response was ‘to protect the author’s/creator’s financial and intellectual rights,’ with 88% (21 responses). The second most popular was ‘to encourage production of intellectual works for the benefit of society’ selected by 54% (13 respondents), closely followed by ‘to protect the publisher’s financial rights’ and ‘to strike a balance between these rights in order to benefit all concerned’ with 46% (11 respondents) each. 4 respondents (17%) selected ‘other’ and used the text box to provide their answers: ‘to exclude others from using the work,’ ‘largely to maintain intellectual property as a

monetizable commodity beyond the live of the author or creator,’ ‘it depends on who the copyright holder is. When the author signs their rights away to a publisher, the publisher’s rights are then protected,’ and ‘the first, second, and fourth answers are purposes of copyright that promote the third answer, which is the original intent of the law.’

1.14.2.2 Information Science vs. Library Science Program

On this question, responses from information science students and library science students differed. The most popular responses for library science students were ‘to protect the author’s/creator’s financial and intellectual rights’ and ‘to encourage production of intellectual works for the benefit of society’ at 80% each (8 participants). Information science students unanimously chose ‘to protect the author’s/creator’s financial and intellectual rights’ (7 responses), but only 29% (2 respondents) chose ‘to encourage production of intellectual works for the benefit of society.’ This represents a clear difference in attitudes about whether or not current copyright law encourages the production of intellectual works which benefit society. Further, a majority (57%, or 4 participants) of information science students selected ‘to protect the publisher’s financial rights,’ while only 20% (2 participants) of library science students selected this purpose. This confirms the theme noted in interviews with information science students, who appeared to be more skeptical about the beneficiaries of copyright than library science students. Again, differences in employment structures such as writing code as ‘works made for hire’ may influence information science students’ views. This is again reflected by students’ responses to the final option on the survey; a majority of library science students (60%, or 6 participants) believe that copyright laws ‘strike a balance between

these rights in order to benefit all concerned,’ while a small minority of information science (14%, or 1 respondent) selected this option. Information science students are therefore much less likely to consider copyright laws as working to balance the distribution of benefits related to copyright laws.

1.14.2.3 Information Ethics Training

Former Information Ethics students differed from other students in their responses to this question. Former Information Ethics students unanimously selected ‘to protect the author’s/creator’s financial and intellectual rights,’ while half (1 respondent) also selected ‘to encourage production of intellectual works for the benefit of society,’ and half selected ‘to strike a balance between these rights in order to benefit all concerned.’ 50% (11 respondents) of other students selected ‘to protect the publisher’s financial rights,’ while no former Information Ethics students selected this response. Students who had not taken the Information Ethics class selected the other results with approximately the same frequency: 86% (19 respondents) chose ‘to protect the author’s/creator’s financial and intellectual rights,’ 55% (12 respondents) selected ‘to encourage production of intellectual works for the benefit of society,’ and 45% (10 respondents) selected ‘to strike a balance between these rights in order to benefit all concerned.’ Other students also included the 4 free-text responses (18% of responses) listed above in *a. General Results*, while no former Information Ethics students opted for a free-text response.

This split could indicate that students receiving Information Ethics training place less emphasis than other students on publishers’ financial rights when they consider the purposes of copyright law. The sample size must be taken into account, however; it may be too small to give a reliable indicator.

1.14.3 Reusing Copyrighted Content from the Web

1.14.3.1 General Results

Students were also asked about their views on how copyright affects the reuse of content found on the web. Options included ‘anything posted to the web is fair game for any type of use,’ ‘anything without a copyright notice is fair game for any type of use,’ ‘all images are copyright protected and one should not take anything for use on one’s own web page without express permission of the owner,’ ‘the web is a free medium and copyright does not apply,’ ‘copyright infringement is a “victimless crime,”’ or ‘other,’ with a text box for responses. Notice that only option 3 is correct (‘all images are copyright protected and one should not take anything for use on one’s own web page without express permission of the owner’), and option 5 is an opinion question; Burgess (1999) used this to test both knowledge of and opinions about copyright laws in her survey.

This question provoked as many textual responses as the most popular listed response, which was unsurprisingly option 3, mentioned above as the only correct statement, at 42% (10 responses). Table 7 presents the variety of textual responses (listed by program of study) which, for the most part, provide more nuance than any of the options listed above. Burgess (1999) surveyed copyright infringers on the web, rather than LIS students, so these options do not necessarily allow for the complexities of intellectual property law that these students are exposed to in the course of their education, such as fair use rights. The fact that students could, for the most part, provide more correct answers by themselves without prompting demonstrates more knowledge of intellectual property rights than a population of the infringers identified in Burgess’ survey. 25% of students surveyed (6 respondents) did choose an incorrect answer,

‘anything without a copyright notice is fair game for any type of use,’ but none chose ‘anything posted to the web is fair game for any type of use’ or ‘the web is a free medium and copyright law does not apply.’ Only one student selected the opinion question identifying copyright infringement as a ‘victimless crime,’ which demonstrates LIS students’ sensitivity to the potential ill effects of copyright infringement on creators and publishers.

Table 7: LIS Students’ Textual Responses About Content Reuse on the Web, by Program of Study	
Program	Textual Response
Information Science	Don't steal from others. Don't think someone isn't going to steal from you.
	Anything posted to the web is fair game for any type of use unless the author specifically specifies not and takes action against people using their content.
	Anything posted on the web can be used by others on the web as long as the use is attributed to the original source
	Fair use and content licensing on the web are ill-defined and not given nearly enough meaningful attention.
	You can't assume that something without a copyright notice isn't copyright protected, so it's best to contact the creator/owner for permission, just in case.
	Creative Commons images and videos can be used as long as you follow the licensing instructions
Library Science	Depends on the context.
Information and Library Science	copyright exists on a case-by-case basis and you should always pay attention to what a site says or what the relevant laws are before borrowing things.
	Content should be assumed to be copyright protected unless licensed under Creative Commons or similar. However, certain uses of copyrighted material are acceptable / legal even without permission.
	Almost anything posted to the web is fair game for almost any type of use.

1.14.3.2 Information Science vs. Library Science Program

This question again revealed a split between information science students and library science students. While 70% of library science students (7 respondents) selected ‘all images are copyright protected and one should not take anything for use on one’s own web page without express permission of the owner,’ only 29% (2 respondents) of information science students selected this option. Information science students were far more likely to provide a textual response, with 86% (6 respondents) choosing this option, compared to only 10% of library science students (1 respondent). Both library and information science students’ textual responses demonstrate a tolerance for the ethical ambiguity of some situations involving intellectual property.

Information science students and library science students selected ‘anything without a copyright notice is fair game for any type of use’ at roughly the same rate; 14% for information science students (1 response) and 20% for library science students (2 responses).

1.14.3.3 Information Ethics Training

Half of students receiving Information Ethics training (1 respondent) selected the correct answer, ‘all images are copyright protected and one should not take anything for use on one’s own web page without express permission of the owner.’ The other half chose to submit a textual response instead, stating that ‘anything posted to the web is fair game for any type of use unless the author specifically specifies not and takes action against people using their content.’ While this response is not technically correct, it does identify the process by which infringing content is usually removed, namely by the rights holder initiating action against the infringer. Other students answered correctly at approximately the same rate, at 41% (9 responses), while these students were slightly

more likely to choose one of the incorrect answers, while a similar percentage provided their own: 27% (6 respondents) chose the incorrect answer ‘anything without a copyright notice is fair game for any type of use,’ while 41% (9 respondents) elected to provide their own textual response (see Table 7 for these; the Information Ethics student’s response, given in this section, is also included in that table in the ‘Information Science’ category). No Information Ethics students chose ‘copyright infringement is a “victimless crime,”’ but only 5% (1 respondent) of other students had this opinion, making this difference statistically insignificant.

1.14.4 Rights Afforded by Copyright Law

1.14.4.1 General Results

Another question in Burgess’ survey asked participants to select one or more statements about United States copyright law to test their knowledge of copyright laws. The options provided were, ‘everything, once in a fixed form, is copyrighted;’ ‘you may make personal copies of any materials for your own use;’ ‘you may distribute copies if you don’t profit from it;’ ‘you may distribute copies if you don’t profit from it and you give credit to the original owner/creator;’ ‘unless something has a copyright notice, it is not copyrighted and may be copied and used at will;’ and ‘copyright law does not apply to the Web.’ Options 1 (everything, once in a fixed form, is copyrighted) and 3 (you may make personal copies of any materials for your own use) are the only answers which are true. Responses to this question varied, although most students (67%, or 16 respondents) correctly identified that personal copies of any materials for use by the owner are allowed. Only 38% (9 respondents) selected option 1, indicating that this facet of copyright law is not as well-known among LIS students as the right to make personal

copies. 25% (6 respondents) incorrectly identified ‘you may distribute copies if you don't profit from it and you give credit to the original owner/creator’ as a right granted by copyright, 21% (5 respondents) incorrectly identified ‘you may make personal copies of any materials for your own use’ as allowed, and 8% (2 respondents) incorrectly selected ‘unless something has a copyright notice, it is not copyrighted and may be copied and used at will.’ No students selected ‘you may distribute copies if you don't profit from it’ or ‘copyright law does not apply to the Web,’ indicating universal awareness of copyright laws’ applicability to the web and of the illegality of distributing copies, regardless of whether the distribution nets profit. While this is good news, the fact remains that most LIS students in this survey are unaware of the process involved with originating a claim to copyright.

1.14.4.2 Information Science vs. Library Science Program

Most information science students selected the two correct answers for this question, with 57% (4 responses) for each. One information science student apiece (14%) selected the incorrect answers of ‘you may make personal copies of any materials for your own use,’ ‘you may distribute copies if you don't profit from it and you give credit to the original owner/creator,’ and ‘unless something has a copyright notice, it is not copyrighted and may be copied and used at will.’ Library science students were mostly familiar with the right to make personal copies of owned materials for the owner’s use, with 60% (6 respondents) identifying this right; however, only 30% (3 respondents) identified that copyright begins when works are first produced in a fixed form. 30% (3 respondents) of library science students incorrectly identified ‘you may make personal copies of any materials for your own use’ and ‘you may distribute copies if you don't

profit from it and you give credit to the original owner/creator' as rights granted by copyright, and one respondent (10%) selected the incorrect option, 'unless something has a copyright notice, it is not copyrighted and may be copied and used at will.' Information science students appear to be slightly more familiar with the process involved with originating a claim to copyright, but this could be a limitation of the small sample size.

1.14.4.3 Information Ethics Training

50% (1 respondent) of former Information Ethics students correctly selected Option 1, 'everything, once in a fixed form, is copyrighted;' however, neither respondent chose the other correct answer, Option 3 ('you may make personal copies of any materials you own for your own use'). These results for Option 3 differ from other students', who chose Option 3 at a much higher rate (73%; 16 responses). Other students chose Option 1 at a similar rate (36%; 8 responses). 50% of former Information Ethics students incorrectly chose 'you may make personal copies of any materials for your own use' and 'you may distribute copies if you don't profit from it and you give credit to the original owner/creator,' which is slightly higher than other students' response rates. 18% of other students (4 respondents) selected 'you may make personal copies of any materials you own for your own use' and 23% (5 respondents) selected 'you may distribute copies if you don't profit from it and you give credit to the original owner/creator.' Additionally, 9% of other students (2 respondents) selected 'unless something has a copyright notice, it is not copyrighted and may be copied and used at will.' Since the sample size for Information Ethics students is so small, this variation may be due to random chance; however, it may indicate that knowledge of Information Ethics has little bearing on students' knowledge of copyright law.

1.14.5 Possible Penalties for Infringement

1.14.5.1 General Results

Another question tested LIS students' awareness of possible penalties of copyright infringement. At least half of all respondents correctly identified each penalty as a possibility: 'Letters asking you to stop,' 'removal of your web sites from the Web by your Internet service provider,' 'your Internet service provider refusing you all services,' 'imprisonment,' 'fines' and 'court awarded monetary damages.' All 24 respondents to this question identified fines as a possible penalty; 92% (22 respondents) identified court awarded monetary damages; 83% (20 respondents) identified letters asking the infringer to stop; 75% (18 respondents) identified removal of infringing web pages by internet service providers; 71% (17 respondents) identified imprisonment; and 50% (12 respondents) identified refusal of all services by internet service providers. This indicates a general familiarity with the possible legal consequences of ignoring intellectual property rights, although extreme punishments such as refusal to serve infringers are less well known.

1.14.5.2 Information Science vs. Library Science Program

Familiarity with these possible punishments did not vary much between information science and library science students, but information science students were slightly more knowledgeable about some of the harsher penalties. 100% of both populations (10 library science respondents and 7 information science respondents) selected 'fines.' All information science students also selected 'court awarded monetary damages;' 90% (9 respondents) of library science students selected this option, as well. Other popular responses included 'letters asking you to stop,' which was selected often by both library science students (80%; 8 responses) and information science students

(86%; 6 responses); and ‘removal of your web sites from the Web by your Internet service provider,’ chosen by 60% of library science students (6 respondents) and 71% of information science students (5 responses). Responses differed for ‘imprisonment,’ which was selected often by information science students (86%; 6 responses), but somewhat less often by library science students (50%; 5 responses). Similarly, only 30% (3 respondents) of library science students knew that ‘your Internet service provider refusing you all services’ is a possible penalty, while a majority (57%; 4 responses) of information science students indicated familiarity with this punishment. Information science students appear, therefore, to be slightly more aware of the two most extreme penalties for copyright infringement than library science students. One possible explanation for these differences could be that information science students become exposed to more technology-focused news resources, which frequently report on harsh punishments for intellectual property crimes (e.g., Gregory Cherwonik’s record 40-month sentence for his role as a systems operator for The Pirate Bay in 2012 (Souppouris, 2012)).

1.14.5.3 Information Ethics Training

Former Information Ethics students were, for the most part, more aware of the possible penalties for infringing copyright than other students. All of these students were aware of ‘court awarded monetary damages,’ ‘fines,’ ‘imprisonment,’ ‘letters asking you to stop,’ and ‘removal of your web sites from the Web by your Internet service provider.’ 100% of other students (22 respondents) also knew that fines were a possible penalty, 91% (20 respondents) selected court awarded monetary damages as a possible penalty, and 82% (18 respondents) knew that letters asking you to stop are a possible penalty.

Fewer other students were aware of other possible penalties, including removal of your web sites from the Web by your Internet service provider (73%; 16 respondents) and imprisonment (68%; 15 respondents). Former Information Ethics students may be more aware of these penalties than other LIS students. Exactly 50% of former Information Ethics students (1 respondent) and of other LIS students (11 respondents) were aware of the possibility of ‘your Internet service provider refusing you all services’ as a result of copyright infringement.

1.14.6 Who Benefits from Copyright?

1.14.6.1 General Results

Another question asked straightforwardly, ‘Who benefits from copyright laws?’ and asked students to select any options that may apply: ‘the author or creator,’ ‘the publisher,’ ‘lawyers,’ ‘yourself,’ ‘society,’ or ‘other, please explain’ with a text entry box. Overwhelming majorities of LIS students identified ‘the author or creator’ (92%; 22 responses) and ‘the publisher’ (96%; 23 responses) as beneficiaries of copyright. Majorities of LIS students also selected ‘lawyers’ (67%; 16 responses) and ‘society’ (63%; 15 responses) as benefitting from copyright laws. Less popular was ‘yourself,’ with only 38% (9 responses), and while two respondents (9%) selected ‘other,’ only one opted to include their own response: “Society would benefit from copyright had it not been stretched from the original brief monopoly period to the multiple decades after the creator's death.” It seems that LIS students see the benefits of copyright for other parties (especially authors/creators and publishers) and for society in general, but not the benefits intellectual property rights provide their individual selves.

1.14.6.2 Information Science vs. Library Science Program

100% (7 respondents) of information science students identified ‘the publisher’ as a beneficiary, with clear majorities also selecting ‘lawyers’ and ‘the author or creators’ (86%, 6 responses each). Less popular responses were ‘society’ (29%; 2 responses), and ‘yourself’ (14%; 1 response); the textual comment also came from an information science student. Library science students recognized the benefits accruing to authors/creators and publishers at similar levels, with 90% (9 responses) selecting each. A minority of library science students (40%; 4 responses) selected themselves as beneficiaries, and one library science student (10%) selected ‘other’ beneficiaries, but did not specify. A majority of library science students selected ‘society’ (80%; 8 responses) and ‘lawyers’ (60%; 6 responses) as beneficiaries. This differs greatly from the information science students’ perception that copyright laws do not benefit society; perhaps the education information science students receive at SILS about the open source software licensing movement, as mentioned by P3, has given these students a sense that society may best be served when information is unrestricted.

1.14.6.3 Information Ethics Training

Students who had taken the Information Ethics course identified the beneficiaries of copyright law at a slightly higher rate than students who had not taken the course. Former Information Ethics students unanimously (2 respondents) chose ‘the author or creator,’ ‘the publisher,’ ‘lawyers,’ and ‘society’ as beneficiaries of copyright law, and half (1 respondent) also selected ‘yourself.’ Among students who did not take Information Ethics, some results were similar. 91% of these other students (20 respondents) identified ‘the author or creator,’ and 95% (21 respondents) identified ‘the publisher.’ However, only 14 respondents (64%) identified ‘lawyers’ as beneficiaries,

59% (13 respondents) identified ‘society’ as a beneficiary, and just 36% (8 respondents) identified themselves as beneficiaries. These differences could be insignificant due to the small sample size, or perhaps taking the Information Ethics course prepared these students to think about the beneficiaries of copyright law in a broader way. No former Information Ethics students chose to provide an ‘other’ response, while two (9%) other students did, although one did not specify what other beneficiaries there might be (see *a. General Results* for the text of this response).

1.15 Comparison of Current Copyright Laws with Desired Restrictions

1.15.1 True/False Statements

1.15.1.1 General Results

Perhaps the most revealing portion of Burgess’ (1999) survey instrument is the 2 questions which include side-by-side comparisons of LIS students’ opinions and existing copyright laws. The first question asks if any of the options that follow are true, then provides several statements about copying copyrighted content. Table 8 reveals that there are wide discrepancies between what LIS students would prefer in terms of copyright law related to copying materials, and what they believe to be current copyright law in this area.

Table 8: LIS Students' Opinions vs. Knowledge of Copying Materials		
Statement	In your opinion...	According to copyright law...
It is OK to copy anything from the web.	3	0
It is OK to copy anything on the web that doesn't say you can't.	7	0
It is OK to copy anything on the web that doesn't have a copyright notice.	6	3
It is OK to use other people's work if you aren't profiting from it.	12	2
It is OK to use other people's work on my own personal pages.	2	0
Copyright law does not apply to the Web.	0	0
Total Responses	30	5

The most frequently desired fictional copying concession is the right to use other people's work if you aren't profiting from it, with 50% of students (out of 24) selecting this response, and 8% believing incorrectly that this is already a right. The second most popularly desired right is 'to copy anything on the web that doesn't say you can't,' with 29% of responses; followed closely by 'to copy anything on the web that doesn't have a copyright notice,' with 25% desiring this allowance. Other desired allowances include 'to copy anything from the web' (13% of respondents) and 'to use other people's work on my own personal pages' (8% of respondents). 13% of students incorrectly thought that it is acceptable to copy anything on the web that doesn't have a copyright notice, while no students either thought or desired that copyright law does not apply to the web.

In comparing the total responses for "In your opinion..." to those for "According to copyright law...", it becomes clear that a significant proportion of LIS students believe that more leniency in the uses allowed by copyright is desirable, but also that most students are aware of the actual uses allowed.

1.15.1.2 Information Science vs. Library Science Program

Library and information science students' levels of knowledge were very similar (29% of information science students incorrectly identified responses as OK according to copyright law, as did 20% of library science students). Their levels of desiring more leniency in copyright law were similar (11 selections out of 10 library science students, versus 7 selections out of 7 information science students), although emphases differed. 60% of library science students believe that it is hypothetically acceptable to use other people's work if you are not profiting from it, versus 43% of information science students. Other answers differed by only one response, which was deemed negligible. A detailed breakdown follows in Tables 9 and 10.

Table 9: Library Science Students' Opinions vs. Knowledge of Copying Materials		
Statement	In your opinion...	According to copyright law...
It is OK to copy anything from the web.	0	0
It is OK to copy anything on the web that doesn't say you can't.	2	0
It is OK to copy anything on the web that doesn't have a copyright notice.	2	0
It is OK to use other people's work if you aren't profiting from it.	6	2
It is OK to use other people's work on my own personal pages.	1	0
Copyright law does not apply to the Web.	0	0
Total Responses	11	2

Table 10: Information Science Students' Opinions vs. Knowledge of Copying Materials		
Statement	In your opinion...	According to copyright law...
It is OK to copy anything from the web.	1	0
It is OK to copy anything on the web that doesn't say you can't.	2	0
It is OK to copy anything on the web that doesn't have a copyright notice.	1	2
It is OK to use other people's work if you aren't profiting from it.	3	0
It is OK to use other people's work on my own personal pages.	0	0
Copyright law does not apply to the Web.	0	0
Total Responses	7	2

1.15.1.3 Information Ethics Training

Half of former Information Ethics students believed that it is legal to 'copy anything on the web that doesn't say you can't' (1 respondent); this compares with only 9% (2 respondents) of other students. No former Information Ethics students believed copying in any of the other situations to be legal, while another 9% (2 respondents) of other students believed that current laws allow one to 'use other people's work if you aren't profiting from it.' Again we encounter the possibility that Information Ethics training is not a strong indicator of increased knowledge of current copyright law.

In terms of hypothetical copying rights, students having completed Information Ethics coursework most desire the right to 'use other people's work if you aren't profiting from it,' at a much higher rate (100%; 2 responses) compared with other students (45%; 10 responses). 50% (1 respondent) of former Information Ethics students surveyed also desired the ability to 'copy anything on the web that doesn't say you can't,' which only 27% (6 responses) of other students desire. Small numbers of other students also desire

the ability to ‘copy anything from the web’ (14%; 3 responses), ‘copy anything on the web that doesn’t have a copyright notice’ (27%; 6 responses), and ‘use other people’s work on my own personal pages’ (9%; 2 responses). Students having taken Information Ethics coursework may be more sympathetic than other students to the copying of copyrighted content when it is motivated by something other than personal profit.

1.15.2 Reusing Images on a Personal Website

1.15.2.1 General Results

Burgess’ (1999) other question of a similar format involved whether or not it is acceptable to display others’ materials on your personal website. In Table 11, we again see a difference in what uses are desired and what uses are thought to be legal, though the difference is not as drastic.

Table 11: LIS Students’ Opinions vs. Knowledge of Republishing Copyrighted Images		
Statement	In your opinion...	According to copyright law...
Pictures, videos, books, etc. that you own	16	12
Any pictures, videos, books, etc.	1	0
Any non-commercial web site without explicit notices that images may not be taken	8	3
Any non-commercial website that has explicit notices that images may not be taken	0	0
Other, please explain	3	3
Total Responses	28	18

Half of all respondents (out of 24) incorrectly believe that an owner of media such as pictures, videos, or books is allowed to photograph these objects and publish the photo online, and 67% believe that this should be allowed. Another fictional right desired by 33% of respondents involves displaying images taken from non-commercial websites which do not have explicit notices that these images should not be reproduced; 13%

incorrectly believe that this is currently allowed by law. 13% of respondents chose ‘other, please explain’ to add additional sources in the text box provided which they felt were appropriate to reuse, all of which are truly legal according to copyright law. These responses were ‘pictures in the public domain;’ ‘pictures, videos, etc. that you have created or content licensed for reuse;’ and ‘Creative Commons images and videos as long as you abide by the license.’ No students believed that it is legal or acceptable to reuse images from ‘any non-commercial website that has explicit notices that images may not be taken.’

1.15.2.2 Information Science vs. Library Science Program

Overall, information science students were more likely to incorrectly believe that republishing images in certain circumstances is acceptable than library science students.

Tables 12 and 13 detail the responses by program of study.

40% of library science students (4 respondents) believed that publishing photos of owned materials is allowed by copyright law, versus 57% (4 respondents) of information science students. A slightly larger minority of information science students (29%; 2 respondents) also believe that it is acceptable to republish images from any non-commercial website which does not display explicit notices that images may not be taken (10%; 1 respondent).

Table 12: Library Science Students' Opinions vs. Knowledge of Republishing Copyrighted Images		
Statement	In your opinion...	According to copyright law...
Pictures, videos, books, etc. that you own	5	4
Any pictures, videos, books, etc.	0	0
Any non-commercial web site without explicit notices that images may not be taken	2	1
Any non-commercial website that has explicit notices that images may not be taken	0	0
Other, please explain	0	0
Total Responses	7	5

When it comes to beliefs about what should ideally be acceptable under copyright law, 100% of information science students (7 respondents) selected that publishing photos of owned materials should be allowed, while only 50% of library science students (5 respondents) agreed. 43% (3 respondents) of information science students believe that republishing images from any non-commercial website which does not display explicit notices that images may not be taken, while only 20% (2 respondents) of library science students agree.

Table 13: Information Science Students' Opinions vs. Knowledge of Republishing Copyrighted Images		
Statement	In your opinion...	According to copyright law...
Pictures, videos, books, etc. that you own	7	4
Any pictures, videos, books, etc.	1	0
Any non-commercial web site without explicit notices that images may not be taken	3	2
Any non-commercial website that has explicit notices that images may not be taken	0	0
Other, please explain	1	1
Total Responses	12	7

1.15.2.3 Information Ethics Training

Among students having taken the Information Ethics course, one respondent (50%) incorrectly believed that current copyright law allows one to post pictures on one's personal website from 'any non-commercial web site without explicit notices that images may not be taken,' compared with 9% (2 respondents) of other students. Other students, however, were more likely to believe that you may post images from 'pictures, videos, books, etc. that you own' (55%; 12 responses); no former Information Ethics students chose this option, or any other options aside from the one given above. Some students who had not received Information Ethics training (14%; 3 responses) also opted to provide their own responses, as detailed in *a. General Results*; no former Information Ethics students provided a free-text response. Although the responses varied, former Information Ethics students were overall slightly less likely to provide an incorrect answer to this question than students who did not take this course.

There are also some differences between the two groups in terms of opinions; half of former Information Ethics students (1 respondent) believe that, ideally, it would be acceptable to post images on a personal website from 'pictures, videos, books, etc. that you own;' this compares with 68% of other students (15 respondents) who would ideally find posting images from these sources acceptable. Half of former Information Ethics students also held the opinion that posting images from 'any non-commercial web site without explicit notices that images may not be taken,' compared with 32% (7 respondents) of other students who would find these sources acceptable for content reuse. Half of Information Ethics students also selected 'any pictures, videos, books, etc.' as permissible sources for reusing images; no other students (out of 22) selected this option. This may indicate that Information Ethics students are more likely than other students to

believe in a right to reuse images from anywhere, as long as there are not notices explicitly forbidding this practice.

Conclusions

Discussion is naturally determined by the results of the survey and interviews, but speaks to both the quantitative and qualitative results, as befitting mixed methods research. The other survey results, such as program affiliation and levels of ethics training, are also discussed within the attitudinal comparisons. The researcher hopes that this will be useful in advancing the literature on LIS student attitudes intellectual property rights both broadly and in detail.

1.16 General Conclusions

Most students considered themselves to be ‘pretty knowledgeable’ about copyright, with little variation between populations. 11% of all students surveyed had taken the Information Ethics course. There was equal representation from all programs among student who had taken the course. Most LIS students surveyed (74%) ‘sometimes’ learned about ethics related to intellectual property rights in other courses. Most (59%) of the overall student sample reported no change in opinion due to coursework at the School of Information and Library Science.

Most LIS students included in the survey see copyright laws as benefitting authors/creators and society. Students in the sample could, for the most part, provide correct answers by themselves about the legalities of reusing content from the web. Their ability to do so in free text form without prompting demonstrates a more enhanced knowledge of the issues surrounding content reuse than the population of the infringers

identified in Burgess' (1999) survey. Very few students included in the survey saw copyright infringement as a 'victimless crime;' this indicates LIS students' sensitivity to the potential ill effects of copyright infringement on creators and publishers. Students had mixed success identifying the rights afforded by copyright; most knew that personal copies of owned materials were acceptable, but most did not know that anything in a fixed form is copyrighted. Most students knew most of the possible penalties for copyright infringement. A significant proportion of LIS students in the survey believe that more leniency in the uses allowed by copyright is desirable, but are also aware of the actual uses allowed. Most (67%) students believed that images taken from personally owned media should be allowed on personal websites, while half believe this to be legally allowed already. A majority of students included in the survey saw publishers, society, authors/creators, and lawyers as the beneficiaries of copyright laws; a minority saw themselves as beneficiaries. One possible explanation for this is that LIS students may be just beginning their careers, and are too inexperienced to have had opportunities to make a living on royalties from their own creations; this would certainly make sense, given the general emphasis on the desirability of users' rights over creators' rights.

1.17 Library Science Students

Library science students were as likely to say that their coursework at the School of Information and Library Science 'somewhat' changed their opinions about intellectual property rights as they were to say 'no.' Most library science students in the sample correctly think that 'all images are copyright protected and one should not take anything for use on one's own web page without express permission of the owner.' Most library science students (along with a majority of former Information Ethics students) are of the

opinion that it is acceptable to use other people's work if you are not profiting from it. Library science students appear to receive a well-rounded education in intellectual property rights during their time at the School of Information and Library Science, although they may not share all of the same opinions as lawmakers. Given this strong support by an educated population, perhaps not-for-profit use of copyrighted materials should receive stronger protection within intellectual property law.

1.18 Information Science Students

Most information science students in the sample incorrectly think that 'all images are copyright protected and one should not take anything for use on one's own web page without express permission of the owner' is a false statement, while most information science students correctly identified both the right to make personal copies of owned materials and that anything in a fixed form is copyrighted. Information science students had higher rates of awareness of the strictest possible penalties for copyright infringement, imprisonment and denial of service from internet service providers. Most information science students incorrectly believe that reusing images taken from personally owned media is legally allowable, and all information science students believed that this should be a right. The mixed levels of knowledge concerning intellectual property rights among this population may point to a need for increased information ethics instruction within the information science curriculum. Narayanan (2014) rightly states that the work of information professionals affects the public's welfare, and proposes that "computer science educators include a discussion of ethics with every significant technology they teach." There seems to be strong support for this idea within the professional community.

Most information science students do not believe that it should be acceptable to use other people's work, even if the person reusing it is not profiting from it. Most information science students did not see society as benefitting from copyright laws, and saw publishers as the primary beneficiary. Perhaps the education information science students receive at the School of Information and Library Science about the open source software licensing movement has given these students a sense that society may best be served when the flow of information is unrestricted.

1.19 Students with Information Ethics Coursework

No former Information Ethics students consider financial benefits to publishers as one of the purposes of copyright, while about half of other students did. No Information Ethics students knew about the right to make personal copies of owned materials. Former Information Ethics students were slightly more aware of most of the possible punishments for copyright infringement than other students. There are indications that Information Ethics students are more likely than other students to support a hypothetical right to reuse images from anywhere, as long as there are not notices explicitly forbidding this practice. Information Ethics students saw authors/creators, publishers, lawyers, and society as beneficiaries at a higher rate than other populations; perhaps taking the Information Ethics course prepared these students to think deeply about the benefits of intellectual property rights. Most former Information Ethics students (along with a majority of library science students) are of the opinion that it is acceptable to use other people's work if you are not profiting from it. Students having taken Information Ethics coursework may be more sympathetic than other students to the copying of copyrighted content when it is motivated by something other than personal profit. In discussions with

colleagues, the researcher heard an example of an interesting theory which may be considered, given these results: perhaps LIS students with higher levels of ethics training will be more accepting of illegal downloading of copyrighted materials, since there is a great emphasis in the current LIS curriculum about the benefits of the open access movement, the hardships experienced by libraries as a result of high prices charged by subscription databases, and the difficult overall position of library collection development in an era of massive budget cuts to library funds. Again, given strong support from an educated population, perhaps not-for-profit use of copyrighted materials should indeed receive stronger protection within intellectual property law. In discussions with colleagues, the researcher heard an example of an interesting theory which may be considered, given these results: perhaps LIS students with higher levels of ethics training will be more accepting of illegal downloading of copyrighted materials, since there is a great emphasis in the current LIS curriculum about the benefits of the open access movement, the hardships experienced by libraries as a result of high prices charged by subscription databases, and the difficult overall position of library collection development in an era of massive budget cuts to library funds. More research is needed to come to definitive conclusions, especially among non-student LIS populations and with controls for age and professional experience.

Summary

Much is still unknown about library and information science students' attitudes about intellectual property rights. The researcher hopes that this research has uncovered the prevailing attitudes of current LIS students in relation to this controversial topic. In addition, the survey or ethics training experience for possible correlation with attitudes may support a need for additional copyright ethics training in LIS. Finally, the division between information science and library science students' differences in attitudes and levels of ethics training received may point to a need for more explicit ethics training within both information and library science, but information science in particular. The sample for this research is small, but the qualitative aspect of mixed methods research allows for meaningful thematic conclusions to be drawn from small, representative samples such as this. These exploratory results may be helpful in further research about LIS student attitudes about intellectual property rights.

Bibliography

American Library Association. (2008). Code of Ethics of the American Library

Association. Retrieved October 30, 2013 from

<http://www.ala.org/advocacy/proethics/codeofethics/codeethics>.

Bonfield, B. (2013). Ending a HarperCollins boycott. *In the library with the lead pipe*.

Retrieved April 1, 2014 from

<http://www.inthelibrarywiththeleadpipe.org/2013/ending-a-harpercollins-boycott-february-27-2011-august-7-2013/>.

Burgess, T. L. (1999). Self-reported reasons for copyright infringement on the web

(Master's thesis). Retrieved from

<https://cdr.lib.unc.edu/indexablecontent/uuid:eb661865-2f16-48c7-bfc1-2ad3bdc845ca>.

Christoph, R., Forcht, K. & Bilbrey, C. (1987/1988). The development of information

systems ethics, an analysis. *Journal of Computer Information Systems*, Winter 1987/1988, 20-22.

Clark, J. B. (2006). Copyright law and the Digital Millennium Copyright Act: Do the

penalties fit the crime?. *New England Journal On Criminal & Civil Confinement*, 32(2), 373-403.

Cohen, E. & Cornwell, L. (1989). A question of ethics: Developing information system

ethics. *Journal of Business Ethics*, 8(6), 431-437.

- Doctorow, C. (2011). Ebooks: durability is a feature, not a bug. *The Guardian*. Retrieved April 1, 2014 from <http://www.theguardian.com/technology/2011/mar/08/ebooks-harpercollins-26-times>.
- Donabedian, D.A., Carey, J. (2011). Pirates and Librarians: Big media, technology, and the role of liberal education. *Library Philosophy and Practice*, 557. Retrieved from <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1588&context=libphilprac>.
- Gopal, R.D., Sanders, G.L., Bhattacharjee, S., Agrawal, M. & Wagner, S.C. (2004). A behavioral model of digital music piracy. *Journal of Organizational Computing and Electronic Commerce*, 14(2), 89-105.
- Hamilton, M.A. (1987). Commissioned works as works made for hire under the 1976 Copyright Act: misinterpretation and injustice. *University of Pennsylvania Law Review*. 135:5, 1281-1320.
- Hinduja, S. (2003). Trends and patterns among online software pirates. *Ethics and Information Technology*, 5(1), 49-61.
- Hinduja, S. (2001). Correlates of internet software piracy. *Journal of Contemporary Criminal Justice*, 17(4), 369-382.
- Kini, R.B., Rominger, A. & Vijayaraman. (2000). An empirical study of software piracy and moral intensity among university students. *Journal of Computer Information Systems*, 40(3), 62-72.
- Klinefelter, A. (2001). Copyright and Electronic Library Resources. *Legal Reference Services Quarterly*. 19:3-4, 175-193.

- Kohler, W. (2003). Professional ethics and values as defined by “the LIS discipline.” *Journal of Education for Library and Information Science*, 44(2), 99-119.
- Konstantakis, N.I., Palaigeorgiou, G.E., Siozos, P.D., Tsoukalas, I.A. (2009). What do computer science students think about software piracy? *Behaviour and Information Technology*, 29(3), 277-285.
- Maughan, P.D. (1999). Library resources and services: a cross-disciplinary survey of faculty and graduate student use and satisfaction. *The Journal of Academic Librarianship*, 25(5), 354-366.
- Narayanan, A. (2014). Why Software Engineering Courses Should Include Ethics Coverage. *Communications of the ACM*. Retrieved from <http://cacm.acm.org>.
- Pantozzi, J. (2013). Updated: are you a Firefly fan who make Jayne hats? Watch out, Fox is coming for you. *The Mary Sue*. Retrieved from <http://www.themarysue.com/jayne-hats-fox/>.
- Pease, J & Price, D. (2011). *An estimate of the infringing use of the Internet* (EPA 430-R-09-004). Cambridge, UK: Envisional. Retrieved from http://documents.envisional.com/docs/Envisional-Internet_Usage-Jan2011.pdf.
- Saracevic, T. (1991). Information science: origin, evolution and relations. In P. Vakkari & B. Cronin (Eds.), *Conceptions of library and information science: Historical, empirical and theoretical perspectives* (5-27). London, UK: Taylor Graham.
- Siegfried, R.M. (2004). Student attitudes on software piracy and related issues of computer ethics. *Ethics and Information Technology*, 6(4), 215-222.

Smith, B.T. (2009). *Ethics instruction in library and information science: The role of “ethics across the curriculum.”* (Doctoral dissertation). Retrieved from

ProQuest. (UMI 3395364).

Souppouris, A. (2012). Head of BitTorrent piracy group jailed for 40 months, longest file-sharing sentence ever. *The Verge*. Retrieved from <http://www.theverge.com>.

Taylor, S.A. (2012). Evaluating digital piracy intentions on behaviors. *Journal of Services Marketing*, 26(7), 472-483.

The Coming of Copyright Perpetuity [Editorial]. (2003, January 16). *The New York Times*. Retrieved from <http://www.nytimes.com>.

U.S. Attorneys’ Manual. Title 9, § 1854.

U.S. Const. art. I, § 8.