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[HOME](#) [ABOUT](#) [LOG IN](#) [REGISTER](#) [SEARCH](#) [CURRENT](#) [ARCHIVES](#)[SUBMISSIONS](#)

[Home](#) > [Volume 15, Number 11 - 1 November 2010](#) > [Eschenfelder](#)



Digital cultural collections in
an age of reuse and remixes

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Abstract

This paper explores the circumstances under which cultural institutions (CI) should seek to control non-commercial reuse of digital cultural works. It describes the results of a 2008 survey of CI professionals at U.S. archives, libraries and museums which gathered data on motivations to control access to and use of digital collections, factors discouraging control, and levels of concern associated with different types of unauthorized reuse. The analysis presents three general themes that explain many of the CI motivations for control: "controlling descriptions and representations"; "legal risks and complexities"; and, "getting credit: fiscal and social costs and revenue." This paper argues that CI should develop a multiplicity of access and use regulations that acknowledge the varying sensitivity of collections and the varying level of risk associated with different types of reuses. It concludes by offering a set of examples of collections employing varying levels of reuse control (from none to complete) to serve as heuristics.

Contents

[Introduction](#)[Methodology](#)[Results](#)[Discussion: Why do cultural institutions seek to control access to digital collections or use of digitized cultural works?](#)[Conclusion: When and how should cultural institutions responsibly facilitate reuse?](#)

Introduction

A citizen blogger visits a state archives Web site to find an interesting photograph to accompany a story she is writing. Having found the perfect historic photo, she also sees a notice on the Web page telling her that any reuse of the photo requires explicit permission of the archives. She wants to get the story done and posted that night. Will she bother to write for permission, or will she just download and reuse the photo on her blog?

This reuse scenario is common. The practice of formally requiring permission for non-commercial reuses — such as blogging, non-profit scholarly publishing, Web-based educational use, or use in a artistic works — is common across CI types, and across both public and private CI [1]. But some have begun to challenge the practice of requiring explicit permission for all non-commercial reuse of digital works, especially those in the public domain. Some charge that control practices are stunting digital humanities and public

scholarship (Bielstein, 2006; Digital Humanities Manifesto 2.0, 2009), and have called for policies of “open access to visual sources not covered by copyright” (Max Planck Institute for the History of Science, 2009).

Many in the CI community also advocate more open collections. Ken Hamma of the Getty Research Institute famously called for institutions to “loosen up” and allow freer use of works out of copyright (Hamma, 2005). Peter Hirtle, of Cornell University Libraries and former President of the Society of American Archivists, has called for CI to stop restricting reuses of public domain materials (Hirtle, 2003; Hirtle and Donovan, 2009). Some high-profile institutions have reduced the reuse restrictions on collections by establishing “commons” collections of public domain (or orphan works) materials that do not require permissions for reuse (Allen, 2009; Bray, 2009; Edson and Cherry, 2010; Hirtle and Donovan, 2009; Smithsonian, 2009b).

It is unclear to what extent expectations about reuse permissions are shifting in the CI professional community to allow some reuses without permission. More liberal reuse is sometimes stymied by real complications of copyright, privacy, publicity, and trademark law as well as concerns about preventing misuse of cultural property and other sensitive collections. Moreover, professional expectations play a role: many CI professionals continue to believe that users ought to ask permission to reuse works before downloading them (Dryden, 2008). And some CI digital collections continue to post copyright claims that control reuse over digital works regardless of their copyright status (Bielstein, 2006; Dryden, 2008; Hamma, 2005; Hirtle, 2003; Mazzone, 2006; Schlosser, 2009). Moreover, other data from this study reported elsewhere show that many CI employ policy and technical tools to control access to and use of digital collections (Eschenfelder and Agnew, 2010; Eschenfelder, 2009).

This raises the question of what types of control CI should exert over *non-commercial downloading and reuse of digital cultural works*. Should explicit permission for reuse be required? What (if anything) should non-commercial users be allowed to do with digital copies of CI collection materials beyond simply viewing them? What (if any) protection against unauthorized non-commercial reuse should CI enact?

This paper argues that there is no one answer to the question of whether CI should exert control over *non-commercial reuse of digital cultural works*. In a society where informal digital cultural production is increasingly important, we argue that CI should seek to reduce non-commercial reuse restrictions and permissions requirements for low-risk materials; but there is no one-size-fits-all solution, and collections with legal or ethical entanglements may require greater control. CI should develop a multiplicity of access and use regulations that acknowledge the varying sensitivity of collections and the varying level of risk associated with different types of reuses. In this paper, we explore these questions in light of conversations in the literature about reuse of digital cultural works and empirical data about CI professionals’ motivations for controlling access and use of digital materials.

This paper is organized as follows: First, it summarizes conversations in literature about reuse of digital collections in terms of three views: the “virtual display case,” “regulated access/cultural property”; and, “cultural remix.” These three views represent characteristic assumptions about digital collections, reuse and culture. The results section describes data from a survey of CI professionals at U.S. archives, libraries and museums about circumstances under which CI should seek to control access to, and reuse of, digital cultural collections, the motivations to control access to and use, and the factors discouraging control of access and use. The [discussion](#) section explains the survey results in terms of three themes: “controlling descriptions and representations”; “legal risks and complexities”; and, “getting credit: fiscal and social costs and revenue.” It explains these themes in light of the three characteristic views of digital collections expressed in the literature. This paper concludes by suggesting a range of reuse strategies CI should consider adopting across their digital collections.

A few definitions: We define digital collections as composed of Web-based digital cultural items including images, text, video and audio (digitized or born digital). We define an “open collection” as a collection that has no access controls and no use controls. That is, any Web user might reuse them without permission. But as we discuss later, many CI professionals have different interpretations of “open collection,” for example; many perceived open collections as collections that were simply open to any Web user to view. By “controlling access,” we mean controlling who can access an online collection, from where, and when. For example, a CI might require payment or registration prior to access. By “controlling use” we mean what users can do with the online collections materials to which they have access. For example, a CI might restrict whether users can save viewed materials and may forbid reuse of those materials on personal Web sites. Access and use controls may be based on “technological protection measures” such as IP range restrictions, watermarks or software

viewers (Eschenfelder and Agnew, 2010), or they may be based on what Hirtle and Donovan (2009) call “aspirational” policy measures, such as posted notices not to download, or click-through licenses that make users promise not to engage in unacceptable behavior.

Three views of access and use controls

Attitudes about reuse of digital collections expressed in the literature can be roughly summarized in terms of three views of digital collections, reuse and culture: the “virtual display case,” “regulated access/cultural property,” and “cultural remix.” These views represent sets of assumptions about how digital collections use should be managed and the nature of culture and its relationship to digital collections. This section concludes with an overview of the legal obligations and professional ethics claims that also influence CI attitudes about reuse.

Virtual display case

We use the term “virtual display case” to refer to the set of values that suggests that CI should protect digital materials by recreating the affordances of traditional display cases. The display case protected museum holdings from damage and theft while allowing visitors to see as much of the contents as possible. CI should create “virtual display cases,” making content as visible as possible while “protecting the images and presentations from unauthorized copying and publication” (Roosen-Runge and Roosen-Runge, 2002). This view emphasizes CI’s role as “protectors or moral guardians” of culture, cultural artifacts, and digital representations of cultural artifacts (Rinehart, 2006). Critics of the virtual display case approach charge that it freezes culture through its efforts to protect it (Burkert, 2008; Wirtén, 2008). Culture is objectified as protected specimens described by experts.

Critics also charge that the virtual display case values can over-emphasize the leveraging of collections for revenue or cost recovery. But given shrinking government support for CI, and the growing costs of maintaining physical materials while developing new online tools, many argue that commercial exploitation is key to CI “long-term sustainability” (Pantalony, 2007; Ross, *et al.*, 2004; Smithsonian Institution, 2009a). But the use of collections to generate revenue is hotly debated in the CI professional literature. Many CI professions see financial revenue, especially from sales of high-resolution materials, as important to their institutions (Dryden, 2008) [2]. Under traditional CI fee schedules, non-profit users pay less than commercial users or have fees waived; however, permission is still required (Bielstein, 2006; American Association of Museums, Registrars Committee, 2004; Tanner and Deegan, 2003; Tanner, 2004).

Cultural property approach

We use the phrase the “cultural property approach,” to refer to the set of values that emphasizes regulating access and use of culturally sensitive materials in order to protect the source group that generated the material (Brown, 2003; Burri-Nenova, 2008; Christen, 2009; 2005). From this perspective, completely open use of cultural materials could dissipate culture through failure to acknowledge source cultures, disrespectful use, commercial exploitation without compensation, or just plain overuse (Brown, 2003; Graber, 2008). Misuse or overuse of traditional cultural property is a grave concern as it is seen as potentially leading to further destabilization or marginalization of indigenous societies (Sahlfeld, 2008).

Controlling reuse of collection items can help sustain marginalized cultures, while still allowing relatively free use and modification of materials within the cultural group’s constraints (Becvar and Srinivasan, 2009; Brown, 2003; Christen, 2009; 2005; Macmillan, 2008). This value bundle views culture as a *performative process*, where transformation of cultural materials (*i.e.*, remixing or mash-up) into new works — if done by a recognized source group — should be celebrated as living culture (Burri-Nenova, 2008; Gibson, 2008). Advocates argue that access and reuse controls should mimic traditional information sharing and use restrictions within the source culture, or “traditional information protocols” (Christen, 2009; Gibson, 2008; Girsberger, 2008; Teubner and Fischer-Lescano, 2008).

Critics of this approach point out that limitations on knowledge/culture sharing may reinforce past injustices or continue discrimination, and that it is difficult to determine which groups’ cultural property merits protection (Brown, 2003). Moreover, traditional information protocols that restrict reuse to group members arguably discourage cultural sharing and exchange (Scafidi, 2005)

Cultural remix approach

We adopt the term “cultural remix” to refer to bundle of values that call for production of knowledge that is “free to use, re-use and redistribute — without any legal, technological or

social restriction" (Open Knowledge Foundation, 2010). This approach has been made prominent by intellectual property advocacy groups such as the Open Knowledge Foundation (<http://okfn.org/>), Students for Free Culture (<http://freeculture.org/>), and Open Content Alliance (<http://www.opencontentalliance.org/>) as well as by public scholars such as Lawrence Lessig (Lessig, 2008).

Culture, from this perspective, is something that ought to be used and reused as part of a "remix," "mash-up," or "collage." In these processes, established artistic or cultural works are recombined, juxtaposed, and reedited to create new works. As Lessig (2008) noted, remix, "succeeds by leveraging the meaning created by the reference to build something new." This approach seeks to reduce barriers to reuse. For example, copyright advocacy groups have called for decriminalizing copying and file sharing for non-profit or educational use (Postigo, 2008).

Critics of this approach point out that open sharing of sensitive or traditional cultural knowledge may harm source groups (Bowrey and Anderson, 2009; Christen, 2009), and that open sharing of materials that contain personal information may harm individuals (MacNeil, 1992).

The cultural remix values attract many in the CI community, but few projects meet the call for no legal or ethical restrictions promoted by open knowledge advocates due to a variety of legal and ethical limitations.

Legal and ethical motivations for limitations on access and use

CI are not completely free to decide potential collection access and reuse terms; rather, legal protections require, or at least strongly suggest, control of access and use for some works. Moreover, professional ethics statements also suggest special treatment for certain types of materials.

First, digital collections contain works for which CI do not own the copyrights; in many cases, the donor of the physical object did not own the copyrights and therefore could not deed them to the CI. Or, donors who do own copyrights may give "digital rights" to a commercial licensing company, while gifting physical objects to CIs (Loe, 2004). Accordingly, in many cases, CI must seek permission from copyright owners before digitizing works. Without control of the copyrights, CI cannot provide permission to others to reuse digital works.

CI collections may contain "orphan works," or works whose copyright status is unknown or whose copyright holders cannot be identified. Providing permission for third-party reuse of orphan works is impossible given the lack of knowledge about who owns the copyrights [3]. Resolving the status of orphan works by finding copyright holders is expensive and often unsuccessful (Akmon, 2010; Allison-Bunnell, 1995; Dryden, 2009; George, 2005; Rimmer, 2006; Troll Covey, 2005). To avoid risk, some digital collections only include known public domain works or works where the digitizers have succeeded in getting permission from rights holders, thereby precluding reuse of any orphan works (authorized or otherwise) [4]. Other projects post orphan works, but warn potential third party users that any reuse of the objects is done at the reuser's own risk (Bray, 2009; Hirtle, *et al.*, 2009).

Unauthorized reuse of digital works may also exasperate concerns about privacy, especially when reuse will be on the Internet. As Clifford Lynch (2002) described Web publication, "There's public and there's really public." Putting a work online makes it "really public," both through initial Web publication, but also by increasing opportunities for unauthorized reuse. Privacy concerns, especially exposure of non-public information, have become more of an issue as institutions are increasingly acquiring the manuscript collections of living persons (Hodson, 2006; 2004). While many privacy rights expire at death, these papers may include private facts about third parties who may be alive and who had no say in the decision to donate materials to a CI. Digitized material may inadvertently expose private facts about these others (Hodson, 2004; Sperling, 2008). But tracking down third parties to obtain consent for making materials publicly accessible online is not realistically possible (Cook, 2002).

Unauthorized reuse of these materials may aggravate these privacy concerns in two ways. First, reuse may draw more attention to the materials in question than the original CI publication. Moreover, the reuse may present the privacy seeker in a defamatory or unflattering light. Some CI professionals may fear that the CI will take the blame for unfortunate third party reuse of digital materials (Dryden, 2008).

Moreover, publicity and trademark laws also complicate reuse of some images. Even if works themselves are not protected by copyright, celebrities or trademark holders can still seek to control reuses of their likenesses or signs as illustrated in the work (Hirtle, *et al.*, 2009).

Finally, professional norms suggest additional limitations not required by law. CI professional association code of ethics statements reflect underlying tensions between “accessibility” and “equal terms of access” and protecting “privacy” and “safety” and respecting “pluralistic values, traditions, and concerns” (American Association of Museums, 2000; American Library Association and the Society of American Archivists, 2009).

The next section continues by describing the study methodology in greater detail.

Methodology

This study employed a paper-based survey methodology in order to learn why institutions might seek to control access to and use of their online collections.

The survey defined *controlling access* as controlling who can access an online collection, from where or when it can be accessed. It defined *controlling use* as restricting what users can do with online collections materials to which they have access. It defined *controlled online collections* as digital collections for which CI sought to control access or control use. The survey asked questions about use of both technology and policy-based instruments to control access and use (Eschenfelder, 2009).

The survey was sent to a purposeful sample of “innovative” cultural organizations that might be more likely to be experimenting with access and use controls rather than a random sample of CIs [5]. Innovative institutions were defined as institutions that met the following criteria:

1. The institution had received a grant that had something to do with digital collections during the period of 2004–Spring 2008. We included recipients of IMLS, NEH, NHPRC, and NSF DL grants.
2. The institution’s staff members had presented about their digital collections at conferences during the last two or three years. Conferences were suggested by the study consultant and initial interviews [6].
3. Institutions suggested by experts in archives, digital libraries and museums studies. Experts reviewed a draft sample list and suggested additions.

Using this strategy, 343 institutions were identified for inclusion in the study [7]. The survey questions were developed through a lengthy process of preliminary interviews, pretesting and pilot studies (Eschenfelder, 2009). The survey was mailed to individuals at each institution with titles such as: *manager of digital collections or digital projects, IP manager, rights manager or head curator*.

The survey fielding in Spring/Summer 2008 included three mailings: a full mailing with cover letter to all 343 institutions, a postcard reminder, and two additional full mailings to institutions who had not responded to the previous mailings (Dillman, 2000). The survey included a two-dollar bill inducement (Fricker and Schonlau, 2002). Additionally, the PI spent the summer of 2008 contacting non-responders in order to get additional returns.

All data analysis was done within the statistical software SPSS.

The survey was returned by 234 respondents for a 68 percent response rate [8] [9]. This total response however, included 80 respondents that reported they did not have and did not plan to create controlled collections. The remaining 154 respondents reported having or planning controlled collections; this included 53 archives, 60 libraries and 41 museums. The majority of the data reported in this paper describes only those 154 institutions with controlled collections. Some data on discouragers for controlling collections includes data from the full 234 responding institutions.

Of the 53 main archives respondents, 22 respondents were state government archives, 18 were college/university archives, six were historical society archives, four were museum archives, two were independent archives, and one was a federal government archive.

The 60 main library respondents included 49 academic libraries, two public libraries, one library affiliated with an archive, one state library agency, one library affiliated with a museum, and six “other” libraries.

The 41 main museum respondents included 16 art museums, six natural history museums,

three history museums, three science and technology museums, two arboreta or botanical gardens, two historic houses/sites, one general museum, one nature center, and seven "other" museums.

It is important to point out several important limitations of the findings. First, the findings are represented in aggregate form for each CI type (archive, library, museum), obscuring important differences within each group. The data should be interpreted as representing the dominant organization form within each CI type: government archives or college/university archives, academic libraries and art museums. Further, because the survey employed close-ended questions, the data largely answers "what" sorts of questions and not "why" sorts of questions. Follow-up case study work currently underway by the first author will fill in many of the "why" questions. The next section summarizes the major results of the survey.

Results

What portion of collections are controlled collections?

Most of the responding institutions reported use of some type of access or use controls on a significant portion of their collections. As shown in [Table 1](#), the majority (71 percent) of responding museums reported controlling a "moderate amount," "large amount," or "almost all or all" of their collections. Just over half of responding archives and libraries reported controlling a "moderate" or "large amount" of collections (54 percent archives; 53 percent libraries).

Portion of collections that is controlled	Archives responding (%)	Libraries responding (%)	Museums responding (%)
Almost none or none	13	17	12
Small amount	32	28	15
Moderate amount	13	17	17
Large amount	9	18	12
Almost all or all	32	18	42
Missing data	1	2	2
Total	100	100	100

Data suggest that most institutions rely on relatively well known tools to control access and use such as limited Internet protocol number (IP) ranges, institutional identification and login systems, visible watermarking technologies, and posting of only lower resolution images, or only clips of videos or sound (Eschenfelder and Agnew, 2010).

What types of collections are controlled?

Data show that historical photographs are the most commonly controlled object type across institutions. The next most commonly controlled object type varied: For archives it was manuscripts and correspondence/diaries/personal records, for libraries it was manuscripts, artistic works, theses, and dissertations, and for museums it was images of cultural artifacts and artistic works. The high ranking of these materials likely stems from the fact that they are among the top most common materials digitized across CI according to digitization surveys (Institute of Museum and Library Services, 2006) [[10](#)].

Table 2: Collection type/materials.

Collection type/materials	Archives selecting (%)	Libraries selecting (%)	Museums selecting (%)
Historical photographs	78	53	65
Manuscripts	41	32	25
Correspondence, diaries, personal records	35	31	20
Maps	33	22	28
Cultural artifacts	29	31	50
Other sound	28	24	15
Other	28	29	15
Artistic works	24	44	50
Educational materials	22	29	38
Rare books	22	29	23
Newspapers	22	20	10
Music	14	20	18
Sheet music	8	14	5
Theses and dissertations	4	32	—

The three most common subject categories of controlled collections in archives and museums included "art, photography, architecture," "societies and culture," and "education, educational materials." Libraries also indicated controlling "performing arts" materials.

Table 3: Subject categories in controlled collections.

Subject category	Archives responding (%)	Libraries responding (%)	Museums responding (%)
Art, photography, architecture	53	69	75
Societies and culture	51	37	30
Education, educational materials	42	31	30
Other	40	29	25
Performing arts	23	36	13
Economics/business	34	14	3
Natural history and environment	26	20	18
Geography	25	24	10
Health and medicine	23	20	3
Sciences	23	22	15
Technology/applied science	21	22	3
Military and defense	21	9	3
Religion and philosophy	19	14	3

Recreation and sports	15	12	3
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While this data suggests that "art, photography, architecture" and "societies and culture" subjects are most commonly controlled, we shouldn't necessarily conclude that these types of objects or subject categories need more protection than other types of materials; rather, the results could all just be a vestige of the dominance of these subjects in online collections overall. Materials in the subject categories of the arts and social sciences are very common; for example, they are the two most populous subject categories in the Institute of Museum and Library Services (IMLS) Digital Collections and Content index [11]. The "education/educational materials" subject heading is more difficult to reconcile as it is not employed by the IMLS index as a category.

Which users can access?

The survey asked respondents to indicate what groups of users could access controlled collections. Respondents could choose more than one response as different collections in the institution might have different access rules.

Table 4 shows that many institutions report no access restrictions for collections (general public). Among libraries however, 65 percent report collections restricted to institutional members. In comparison, 38 percent of archives and 32 percent of museums reported access restrictions to some collections to institutional members.

A notable percentage of institutions reported restricting access to some subset of institutional members (28 percent archives, 37 percent libraries, 32 percent museums). A similar percentage reported access restrictions for some collections to "affiliates" (26 percent archives, 37 percent libraries, 32 percent museums).

A small percentage of each institution type reported access restrictions on some collections to "individually registered users" — implying that users had to register before accessing the collection (15 percent archives, 17 percent libraries, 24 percent museums). A very small percentage reported access restriction on some collections to paying customers or subscribers (11 percent archives, 10 percent libraries, seven percent museums).

In understanding why CI limit access to online collections, it is important to realize that the primary goal for some digitization is preservation rather than increasing access. In those cases the target audience for some digitized materials may be collections staff and select researchers rather than the general public (Institute of Museum and Library Services, 2006).

Which users can access and use controlled online collections?	Archives selecting (%)	Libraries selecting (%)	Museums selecting (%)
General public	60	42	61
All institutional members	38	65	32
Subset of institutional members	28	37	32
Affiliates of institution	26	32	37
Individually registered users	15	17	24
Paying customers or subscribers	11	10	7
Other	11	18	12

The data show that most collections are open to the general public. Archives' high ranking of

general public collections makes sense because archives rank the general public as the most common target audience for digital archival collections (Institute of Museum and Library Services, 2006). Libraries high ranking of collections limited to institution members make sense given the high number of academic libraries in the sample that may wish to restrict certain collections to "authorized" campus users (*i.e.*, faculty, registered students and staff). The strong general public orientation by museums is more surprising. Past surveys show museums' digital collection target audiences more heavily weighted toward internal staff users (Institute of Museum and Library Services, 2006).

Access by the general public however does not mean unrestricted use. Institutions may employ use control technologies such as low resolution images, terms of use statements or other tools to limit the ways the general public can make downstream uses of collection materials which they access (Eschenfelder and Agnew, 2010).

What uses create concern?

The questionnaire asked respondents to indicate their level of concern about each of a series of possible unauthorized reuses. Respondents could answer employing a scale with the values: "not at all concerned," "a little concerned," "some concern," or "a lot of concern."

[Table 5](#) shows the percent of respondents from each institution type that marked "some" or "a lot" for each listed unauthorized reuse. Not surprisingly, all three institution types were most concerned about unauthorized commercial publication, although archives expressed less concern than libraries and museums (77 percent archives, 90 percent libraries, 93 percent museums).

Unauthorized uses	Percent concerned "Some" + "a lot"		
	Archives (%)	Libraries (%)	Museums (%)
Individual research and study	11	15	22
Non-commercial educational use	13	23	15
Non-commercial modification or derivative use	49	53	61
Non-commercial publication	60	72	68
Non-attribution	66	87	81
Commercial publication	77	90	93

Non-attribution generated the next biggest concern (66 percent archives, 87 percent libraries, 81 percent museums). Non-commercial publication was the third most marked concern (60 percent archives, 72 percent libraries, 68 percent museums). Non-commercial modification and derivative use also created significant concern (49 percent archives, 53 percent libraries, 61 percent museums).

Other unauthorized reuses such as individual research and study and non-commercial educational use generated less concern. It is worth noting that a higher percentage of museums expressed concern about individual research and study (22 percent vs. 11 percent for archives and 15 percent for libraries). Further, a higher percentage of libraries expressed concern about unauthorized use for non-commercial educational purposes (23 percent libraries vs. 13 percent archives and 15 percent museums). Further research is needed to explain these findings.

The lower level of concern expressed by archives across the different types of unauthorized reuses may stem from the large number of government archives in the response set. Government archives may have less concern about commercial use of government records or documents they publish because these materials are in many cases not protected by copyright law.

What motivates institutions to control collections?

The survey asked respondents to rate motivations for creation of controlled collections. Respondents rated each item on a list of possible motivations with one of the following values: "not at all," "a little," "somewhat," and "a lot." [Table 6](#) summarizes data on the motivators. It includes two values:

Percent listed: This is the percentage of institutions that marked each factor as motivating them "somewhat" or "a lot" to create controlled online collections.

Motivator ranking: This is an overall ranking of motivators. Because some motivators had the same percent values, the table shows ties. Within the table, the four top motivators are marked in red. Mid-level motivators, or lower ranked motivators chosen by over 25 percent of respondents in each institution type, are marked in blue.

[Table 6](#) shows that institutions are motivated to create controlled online collections because the following concerns:

- Avoid misuse/misrepresentation;
- Proper object description and repository identification;
- Avoid legal risk; and,
- Donor or owner requirements.

These four motivators were ranked highly across archives, libraries and museums.

Mid-level motivators showed more variance across institution types. For example, libraries ranked "Cannot obtain rights" fourth, but archives and museums ranked it tenth, and it did not even qualify as a mid-level motivator for museums. In another example, museums ranked "Control information about endangered or valuable objects, animals, cultural events/items" fifth, but archives and libraries ranked it thirteenth and fifteenth. Finally, archives and museums ranked "Control access to sensitive materials (racial, ethnic, religious, health)" as a mid-level motivator (seventh and eighth) but it was ranked quite low by libraries (fourteenth).

	Motivator ranking (% marking factor as "a lot" or "somewhat" of a motivator to create controlled online collections).		
Motives for creating controlled online collections	Archives	Libraries	Museums
Avoid misuse/misrepresentation	2nd (66%)	1st (80%)	2nd (66%)
Proper object description and repository identification	1st (72%)	5th (52%)	1st (71%)
Avoid legal risk	3rd (51%)	3rd (68%)	3rd (44%)
Donor or owner requirement	4th (45%)	2nd (73%)	4th (39%)
Cannot obtain rights	10th (25%)	4th (53%)	10th (22%)
Generate income	5th (42%)	10th (18%)	9th (27%)
Protect privacy	6th (40%)	9th (20%)	6th (34%)
Control access to sensitive materials (racial, ethnic, religious, health)	7th (38%)	14th (10%)	8th (29%)
Recover costs of IP management	8th (30%)	12th (13%)	11th (17%)

Reduce download times for users	8th (30%)	11th (15%)	11th (17%)
	Motivator ranking (% marking factor as "a lot" or "somewhat" of a motivator to create controlled online collections).		
Control server/network loads or storage space	9th (26%)	13th (12%)	10th (22%)
Limit exposure to materials authors intend to publish, patent, commercially exploit	9th (26%)	8th (32%)	8th (29%)
Maintain exclusivity	10th (25%)	7th (37%)	10th (22%)
Burden of rights search	11th (24%)	6th (38%)	7th (32%)
Protect public safety or national security information	12th (19%)	16th (3%)	13th (2%)
Avoid conflicts with financial supporters or governing bodies	12th (19%)	11th (15%)	12th (15%)
Control information about endangered or valuable objects, animals, cultural events/items	13th (17%)	15th (8%)	5th (37%)
Control access to potentially offensive materials (sexual, anatomical, drug-related)	14th (13%)	16th (3%)	12th (15%)

What discourages institutions from creating controlled online collections?

The survey explored reasons why institutions might avoid employing access or use controls by asking respondents to rate possible discouragers to controlling collections. Respondents rated each of a list of possible discouragers by marking one answer from the values: "no discouragement," "a little discouraging," "somewhat of a discouragement," or "discourage a lot." [Table 7](#) includes two values:

Percent listed: The percentage of institutions that marked each factor as "somewhat of a discouragement" or "discourage a lot."

Discourager ranking: This is an overall ranking of discouragers. Within the table, the four top ranked discouragers are marked in red, and mid-level discouragers, lower ranked discouragers chosen by over 25 percent of respondents, appear in blue.

The top discouragers varied, but the following top discouragers were shared across institution types:

- "Belief that open collections have greater impact";
- "Concerns with legal complexity"; and,
- "Institutional mission, policies or statutory requirements"

Additionally, "Institutional level technology choices" was ranked second by archives, third by museums but sixth by libraries.

Mid-level discouragers varied by institution types. Archives indicated "Concerns about end user dissatisfaction," and "Concerns about negative perceptions by partners, funders or peers." Libraries also indicated "Concerns about negative perceptions by partners, funders or peers" and also marked "Concerns with technological management complexity," "Do not have content appropriate for controlled online collection" and "Few best practices or examples from which to model." Museums were also concerned about "Technological management complexity."

Table 7: Discouragers to creating controlled online collection.			
Discourager	Concern ranking		
	Archives	Libraries	Museums
Belief that open collections have greater impact	1st (59%)	1st (77%)	1st (54%)
Concerns with legal complexity	3rd (29%)	2nd (59%)	2nd (44%)
Institutional mission, policies, or statutory requirements	2nd (42%)	3rd (47%)	5th (20%)
Institutional level technology choices	2nd (42%)	6th (30%)	3rd (30%)
Concerns about end user dissatisfaction	4th (27%)	3rd (47%)	6th (17%)
Concerns about negative perception by partners, funders or peers	4th (27%)	6th (33%)	7th (15%)
Concerns with technological management complexity	5th (23%)	4th (40%)	4th (29%)
Do not have content appropriate for a controlled online collection	5th (23%)	7th (25%)	9th (10%)
Few best practices or examples from which to model	5th (23%)	7th (25%)	4th (24%)
Concerns about unknown consequences	6th (17%)	8th (17%)	5th (20%)

The next section summarizes the study findings in three main themes that help to explain the motivators and discouragers for controlling access to, and reuse of, digital collections materials.

Discussion: Why do cultural institutions seek to control access to digital collections or use of digitized cultural works?

The survey results show some contradictions between our definition of "open collections" and what they mean in practice. On one hand, CI ranked "open collections have more impact" as the number one discourager of controlling access or use. Yet results show CI are concerned about unauthorized reuse; moreover, they employ a range of technological and policy tools to control reuse (Eschenfelder and Agnew, 2010). The contradiction between the high ranking of "open collections have greater impact" and concerns about reuse, misuse and misrepresentation can be explained in part by different interpretations of the term "open collection." The survey instrument did not explicitly define an "open collection," but defined a controlled online collection as a collection in which access to a work was controlled or use of a work was controlled. One might infer from this definition that an open collection is one in which there is no control on access or use. Results however, suggest many respondents have a different conceptualization of "open collection." What is an open collection? It could be

open to all users and not require permissions for any non-commercial reuse. Or, it could be collections where approved reuses of collections materials will be free, but permission for reuse is still required. Finally, it could be a collection for which there are no impediments to viewing a work online, but permissions for any reuse are required. It is not clear what CI professionals consider an "open collection," but given the latter definition, the contraction between the high ranking of open collection having more value and CI's concerns about reuse disappears - both are possible. Future studies should use more explicit definitions of open collection.

Given these ambiguities about open collections, this discussion tries to sum up and explain many of the CI motivations for controlling access to or use of collections in terms of three general themes. The themes help to explain the seeming contradiction between valuing openness and continued practices controlling reuse in addition to providing explanatory details about the top motivators and discouragers. After discussing the three themes, this section suggests circumstances under which reusers of collections materials ought to be able to make use of collections items without seeking permission.

The three themes we developed to summarize the motivational data include "Object descriptions, representations and control," "Legal risks and complexities," and "Getting credit: fiscal and social costs and revenue." In this section, each theme is discussed with reference to the study data and with reference to the three bundles of values that influence CI attitudes about access and use (i.e., virtual display case, regulated access, and open knowledge). The closed ended nature of the survey limited the extent to which its data could explain why some concerns ranked higher than other concerns. We therefore drew on the extant literature of the CI and cultural studies fields to assist in explaining the study findings. Ongoing follow up case studies will further inform these explanations.

Theme 1: Controlling descriptions and representations

Issues related to description and representation of works emerged as top motivators for CI to control access and use of collections. "Avoid misuse and misrepresentation" was ranked first by libraries and second by archives and museums. "Proper object description and repository identification" was ranked first and second by archives and museums but fifth by libraries.

These motivations allude to three interrelated concerns in the CI profession: accuracy in description, misuse of materials, and repository identification. These concerns stem in part from assumptions about culture and use inherent in the virtual display case value set and concerns about dissipation and respect inherent in the cultural property value set.

Issues of authority and description have long created professional anxiety in cultural stewardship. A description is a major part of the representation of an object: it shapes interpretation and contributes to its value to the public. Traditional views of archival and museum descriptions see cultural professionals as "impartial craftspeople" producing descriptions representing truths inherent in the objects and contributing to universal ordering structures (Cameron and Robinson, 2007; Duff and Harris, 2002). Arguably, CIs generate value to society through creation of authoritative descriptions (Smithsonian Institution, 2009a). Moreover, studies show that authenticity and credibility of works and their descriptions is key for certain users of CI images (Canadian Heritage Information Network, 1999).

More recently, postmodern critiques have cracked the façade of the "authoritative voice" created by traditional CI descriptions (Walsh, 1997). Critics emphasize CI professionals' partiality and fallibility in creation of descriptions that may reflect incomplete knowledge and unconscious biases (Cameron and Robinson, 2007; Duff and Harris, 2002). Secondly, critics highlight how descriptions hide underlying disagreements about facts and interpretations. Object descriptions regularly change as new facts arise or as interpretations change (Smithsonian Institution, 2009a; Walsh, 1997). Moreover, critics point out that descriptions may represent source individuals or communities in ways with which they do not agree (Shilton and Srinivasan, 2007). Critiques have emphasized the need to embrace the "polysemy of objects" or the idea that an object may have different meaning for different groups, and that various interpretations of an object are generated as different groups interact with it in different contexts (Cameron and Robinson, 2007).

Some argue that increased third party participation in description should be encouraged (Light and Hyry, 2002; Duff and Harris, 2002). Proponents argue that public input could engage remote and previously unknown amateur experts to assist with descriptions, thereby increasing the value of collections and public commitment to works (Srinivasan, *et al.* 2009; Cox, *et al.*, 2007; Krause and Yakel, 2007).

On the other hand, third party participation in description raises concerns. The brand value

of institutions may fall if others perceive they sponsor inaccurate content. Public input could increase legal risk if users produce incorrect information, or if critical public comments lead to charges of libel (Wienand, *et al.*, 2000). Moreover, many users may prefer a tidy authoritative summary to a confusing multiplicity of narratives requiring more reading, judgment and synthesis (Cameron and Robinson, 2007). Hamma (2005) complains that despite increased postmodern sensibilities, institutions continue to “control all voices but their own” by controlling who uses their images.

The unauthorized reuse of works on the Web both reflects and intensifies all of the above concerns. Unlike public input to an institutional Web site, which staff can edit, CI staff have no opportunity to edit reuse of materials on third party Web sites. “God only knows what people are going to do with it [copy of object],” remarks the manager in Michael Edson’s (2009) humorous video commentary “Web Tech Guy and the Angry Staff Person.” In many cases, the most CI professionals can do is send a letter requesting that the user modify or remove the work. And studies of CI professionals show that ensuring authenticity of digital works is an ongoing concern (Dryden, 2008).

But, there are important practical and ethical reasons for wanting to control reuse to ensure accurate descriptions. Practically, many people viewing digital surrogates of works want to know where to get more information, for example to license use of the work in an ad, a book or a documentary. Inaccurate metadata published with a reused copy of a work on a third-party Web site can increase the logistical work needed to get an interested user connected with the correct licensing manager. Reuse also increases risk of disrespectful or defamatory framing of a work. Third party re-representations may present works, their source communities, or people pictured in the works as illegitimate, absurd, laughable or objects of hatred. This is particularly troublesome if the source community is a historically disadvantaged or misrepresented group and/or the digital work in question is considered a traditional cultural expression (TCE). CI professionals may feel a “duty” to ensure respectful uses (Tanner, 2004). Collections staff may therefore seek to control reuse of collections in order to ensure that they are not disrespected, or to ensure that all uses are serious or academic in nature (Max Planck Institute for the History of Science, 2008). The drive to control reuse also stems from promises made to donors; for example, a CI might promise that a work never be used by third parties without special permission by the donor. Unauthorized reuse could lead donors to perceive a lack of custodial responsibility, thereby discouraging future donations.

Controlling how works are reused is not new. As part of this sense of obligation to preserve the integrity of works, CI regularly deny reuse requests that: disrespect or are detrimental to the artist work or institution, contradict the values of the institution, seek to crop or modify the work, reflect “poor taste,” are “undignified,” are political or religious in nature, will promote unsavory products such as alcohol or tobacco, and depict people who are still alive (Tanner, 2004).

From this perspective, the permission process is a way of ensuring the accurate descriptions and respectful uses of a work demanded by both the display case and cultural property sets of values. These motivations explain in part why CIs require users to seek permission and sign a license dictating terms of use — regardless of whether the use qualifies as fair use or whether the item is in the public domain (Dryden, 2008; Schlosser, 2009). The licensing process permits only accurate descriptions and those uses deemed respectful or appropriate.

A word of caution here: While one may be sympathetic to using permissions to ensure accuracy and respect, some charge these tools have been used by owners and CI to stifle critiques of work like contemporary art (Max Planck Institute for the History of Science, 2008). Moreover, controlling reuse of content to ensure respectful uses conflicts with the cultural remix assumption that there should be no legal or moral restrictions on reuse of information. One participant in a Berkman Center workshop in Fall 2009 suggested a Creative Commons “respect license (cc:respect)” as a potential solution: Users of works would essentially promise not to use it in a disrespectful manner. However, which uses constitute “respectful” uses are open to interpretation.

Theme 2: Legal risks and complexities

There are numerous legal and ethical obligations associated with collections that complicate permissions free reuse. The obligations CI face are demonstrated in the top ranking of “Avoiding legal risk” as a motivator of control (ranked third). The vague wording of the survey choice makes it impossible to say what legal risks motivated participants; however, attention to the more specific, but lower ranked, answers suggests a variety of legal concerns. For example, compliance with donor requirements was ranked second by libraries and fourth by archives and museums. Other mid-level legal motivators included protecting intellectual property rights that owners may wish to exploit, difficulty in obtaining rights for

digitization and publication, and protecting privacy of people depicted in works.

“Donor or owner requirement” stems from the legal and ethical obligations created between donors of works and CI when donors sign deeds of gift and transfer cultural works to a CI. The rights a CI has with regard to a given donation are dictated by the terms of those contractual agreements (Hirtle, *et al.*, 2009). In some instances, the deed may require institutions to limit reuse of the work. For example, the donor may give the institution the right to display a digital copy of a photograph, but not to permit any third party uses. In this case, an institution may simply not have the rights to permit any reuse. Contractual obligations to donors are difficult to reconcile with the cultural remix demand for unfettered access and use.

Intellectual property (IP) concerns including “Protect things people are going to publish, patent or commercially exploit,” “Burden of Rights Search,” and “Cannot obtain rights” were ranked as mid-level motivators. The modest showing of these IP motivators is surprising given the attention given to orphan works in the CI literature. One explanation for the modest ranking is that institutions simply choose not to digitize risky copyrighted material (Dryden, 2009). As seen in [Table 4](#), CI have also developed other technical strategies to reduce IP risks including Internet Protocol address restrictions to limit access and use to on-campus or in-building users, and limiting access to individuals who go through a registration and approval process (Eschenfelder, 2009; Eschenfelder and Agnew, 2010). Limiting access to a smaller group of users who can demonstrate educational use reduces risk both by strengthening a fair use claim and by maintaining a low profile to avoid complaints.

Privacy related concerns were also ranked modestly: sixth by archives and museums and ninth by libraries. One explanation for this modest ranking is that institutions may avoid digitizing works that have privacy issues. Also, donors’ deeds of gifts may not permit digitization (Boles, 2005). Some donors maintain the right to screen researchers before granting access to physical collection items, while other donors place a seal on sensitive physical material for a designated time period, usually past the expected life span of third parties associated with the collection (Boles, 2005; Hodson, 2006; 2004). Alternatively, institutions may have found alternative means of alleviating privacy risks. For example, an institution may bury a digitized work by removing personal names from metadata or simply by avoiding placing the work in any prominent location on the Web site. This “privacy protection through digital obscurity” may provide good enough protection for images that do not put donor relations at risk or conflict with privacy laws.

From a virtual display case perspective, while controlling access to or use of collections might diminish some legal and ethical risks, controlling collections also adds new administrative burdens. These burdens are reflected in the participants’ high ranking of “Legal Complexities” as a discourager to controlling access or use of collections. Exerting control may require rewriting terms of use statements and copyright policies as well as developing license language and setting up a reuse approval process. Moreover, in cases where access is restricted to select groups, institutions may feel the need to provide a justification for the chosen access or use restrictions in order to address the potential conflict between restricted access and CI missions and ethics statements that require equality in access to collections.

Theme 3: Getting credit: Social and financial costs and benefits

Institutions want to receive social and financial credit for the resources they invest in digitization, description and stewardship. But the social and financial credit motivators are largely predicated on control inherent in the virtual display case or cultural property approach. Reduction of barriers to reuse, suggested by the Remix set of values, complicates generation of credit.

Arguably, the traditional permissions-based reuse practice is integral to CI getting credit. If users contact CI for permissions, CI can generate data on reuse of collections materials that can show the impact of a collection, and CI can use impact data to argue for greater social and financial benefits. Data about use is therefore “an important asset” to CI (Bray, 2009). Reference to a host repository in published works brings social credit to the repository (Beilstein, 2006; Max Plank, 2009). Moreover, institutions are under pressure to show that digital initiatives have measurable cultural benefit, and use data is a measurable form of cultural benefit (Bray, 2009; Smithsonian Institution, 2009a).

Permission-free reuse also complicates attribution and credit acquired from correct identification of the host repository. Some have suggested use of Creative Commons (CC) licenses that require attribution, such as CC Attribution 3.0, to ensure that CI get social credit for reuse (Max Plank, 2008) [[12](#)]. But, one could argue that required use of a CC

Attribution license, especially for public domain materials, places restrictions on reuse of a work that should have no restrictions. Some have suggested that watermarking and web tracking could be used to count use *post hoc* (Bray, 2009). It is unclear if CI have the financial and technical capacity to tag all works and pay for tracking services, and other results from this study show that this type of technology is currently not widely used (Eschenfelder and Agnew, 2009).

Social and financial credit are closely tied together: good data on impact tends to increase funding opportunities. Given the link between measurable impact and credit, it is not surprising that "Proper object description and repository identification" was ranked second as a motivator. Moreover, the importance of both reuse counting and getting credit may explain in part why many CI professionals view attribution without permission as unacceptable (Dryden, 2008). It is not enough just to attribute, the use must also be counted.

But levels of concern about reuse are likely mediated by the unique situation including the nature of that use, the impact of the reuse on the CI's social credit and attributes of the material that was reused. Level of concern would vary in light of whether the reuse facilitates further unauthorized copying: use on the Web vs. use in a printed newsletter. Unauthorized Web reuse without attribution may be more of a concern if it wastes a good opportunity for gaining social credit. Further, concerns about reuse would logically be higher for works that have copyright, privacy or cultural sensitivity issues.

Our data show that levels of concern for unauthorized reuses does vary by the nature of the reuse: participants expressed less concern about individual research and use, and non-commercial educational use, than for derivative uses and non-commercial publication. Some studies have found that the majority of museums considered unauthorized *educational use* of materials acceptable (Tanner, 2004). Future research should measure concerns about reuse under different reuse scenarios to more fully explore the connections between attitudes about unauthorized use, attribution, and use counting.

CI may also fear social costs associated with embarrassing misuse of materials by third parties. Some fear that misuse could reflect badly on the institution that made the initial digital copies available (Dryden, 2008). Permitting liberal reuse could leave CIs open to charges of lack of stewardship by donors if those works are then reused in a demeaning or controversial manner (Hirtle, *et al.*, 2009). Some worry that third party misuse makes institutions a target for litigation, especially by commercially minded artists or estates (Tanner, 2004). This concern may be particularly strong for collection items that are socially sensitive (*e.g.*, first peoples' material, racial material, endangered species, and archeological maps). Our data show that reuse of sensitive materials is a concern — while not a top motivator, museums ranked controlling access to "endangered or valuable animals, cultural events/items" fifth. Archives and museums ranked controlling access to "racial, ethnic, religious or health" seventh and eighth respectively.

Credit may also come from licensing fees. "Generate income" and "Recovery of IP management costs" were reported as mid-level motivators, suggesting that respondents believe that at least some collections should bring in money. However, the degree to which licensing non-commercial use can generate revenue or even cover costs is under debate (Allen, 2009; Max Planck Institute for the History of Science, 2009). Many have dreamed that automated licensing systems would keep transaction costs low, but licensing remains largely manual and, many charge, highly inefficient (Tanner and Deegan, 2003; Beilstein, 2006) [13]. As the Smithsonian Institution Web and New Media Strategy argues, "Attempting to directly monetize access to, and use of, museum content does not appear to be a sustainable business model" [14]. Drawing on values from the Remix approach, proponents of free non-commercial reuse emphasize that more liberal use terms will more effectively support scholarship and draw positive attention to collections (Allen, 2009; Bray, 2009; Edson and Cherry, 2010; Hirtle and Donovan, 2009).

Some argue that fees for non-commercial reuses are still necessary (Max Plank, 2008). Providing digital copies of works requires labor; requests requiring new photography or research may incur substantial costs (Town Hall Meeting, 2007). Moreover, licensing of popular works can subsidize development of other parts of a collection (Smithsonian Institution, 2009a). Some suggest licensing ensures image quality, and that the burden of the process discourages over-use of an image or that public institutions need to charge for visible costs in order to appear fiscally responsible (Tanner, 2004).

While there may be social and financial benefits to controlling use, there are also social costs associated with heavy controls over reuse — there is danger of being portrayed as "hoarding" cultural works. Many have criticized public institutions for copyright statements that imply ownership or the right to dictate reuses of digital copies of public domain works (Beilstein, 2006, Mazzone, 2006; Public.Resource.Org, 2007). Some institutions continue to suggest

they have property rights over digital copies of two-dimensional public domain works. Some may do so inadvertently, but others may disagree with current case law which suggests these digital copies cannot be copyrighted (Beilstein, 2006; Wojcik, 2008).

Perceptions of unfair institutional restrictions on use of cultural content can generate bad publicity and create funding problems for tax-supported public institutions (Trescott, 2006).

Studies suggest that institutions are sensitive to this potential criticism: "Concern about end user dissatisfaction" was ranked third as a discourager of controlling access or use by libraries and it was ranked fourth and sixth by archives and museums. "Concerns about negative perceptions by partners, funders and peers" was also ranked as a mid-level discourager of access controls or use controls.

Conclusion: When and how should cultural institutions responsibly facilitate reuse?

The real question raised by the results of the study is when is it acceptable or even necessary for CI to limit reuses of digital collection items? Or phrased differently, how can CI permit responsible reuse in a way that does not conflict with law, ethics or the fiscal solvency of the CI? Our data point to the motivations CI professionals indicated for controlling reuse of collection items summarized in terms of the three themes of "controlling descriptions and representations," "legal risks and complexities," and "getting credit: social and financial costs and benefits." Adequate discussion of whether and when these motivations are sufficient is sorely needed.

The three themes, as noted above, are full of contradictions and tensions. These reflect simultaneous strong appreciation for "open" collections (although as discussed earlier it remains unclear what exactly "open" means) and abiding concerns about descriptions, irresponsible reuses, and credit. The three bundles of values discussed in this paper — Virtual Display Case, Cultural Property/Regulated Access, and Cultural Remix — embody these contradictions and tensions; all the bundles suggest important virtues, but the virtues may contradict one another.

The contradictions in the data also likely stem from the diverse mix of CI and collections included in the study. Archives, libraries, and museums differ in their mission statements and the degree to which they emphasize collection stewardship over public access. Moreover, important differences exist within groups; a natural history museum with a large collection of native American cultural works has different concerns than a museum of fine art. Whether or not one virtue is more appropriate than another depends on specifics: what is the mission of the CI, what types of materials are in the digital collection?

Moreover, any one institution maintains many cultural collections, each of which may have unique contractual, ethical and legal requirements that may encourage or constrain reuse possibilities. The challenge for CI will be to draw from across these value bundles in light of their missions, the unique legal and ethical requirements of different collection items, and budgetary challenges.

Cognizant of these constraints, we argue that CI should seek to develop a range of reuse policies that reflect the different legal and ethical requirements of different collection materials. As resources permit, CI should review existing reuse policies and apply the revised range of reuse policies to different parts of their collections as appropriate. Importantly, that range ought to include a fee and permission free reuse policy for low-risk commons collections. These commons collections should be actively marketed as part of the CI's contribution to society — part of its impact.

The following examples provide a heuristic to spur thinking about reuse by illustrating different levels of reuse and tools employed to manage reuse. Note that in each example, the resolution of the digital work may itself be varied to control use as only providing low-resolution materials precludes certain reuses.

Commons collection: Commons collections include digital cultural materials that are free for others to use and reuse without permission (Edson and Cherry, 2010). Importantly, a CI does not necessarily grant

permission for reuse - in most cases it disavows the responsibility of granting or denying permission. For example, Cornell University's Digital Collections Guidelines "does not grant or deny" permission to reuse public domain material in its collection (<http://cdl.library.cornell.edu/guidelines.html>).

Other examples like the Flickr Commons and N.J. Digital Video Repository (NJVID) commons collection employ phrases like "no known legal restrictions" to signal that the work is either in the public domain, believed to be in the public domain, the rights holder is not interested in exercising copyright control, or that the rights holder has permitted unrestricted reuse. Importantly, their terms of use include explanations that public domain status of a work is not guaranteed, and that reusers ought to conduct their own legal analysis prior to reuse of any material to ensure it is not protected by copyright or otherwise constrained by privacy, publicity or trademark laws (<http://www.flickr.com/commons/usage/>).

Posted terms and conditions: A large number of CI employ posted terms and conditions statements to control reuse, either in formal policy language or as rights metadata. Terms and conditions statements vary greatly in their permissiveness toward varying types of reuse. For example, some videos posted on NJVID do not permit any downloading or reuse. Others terms and uses permit some reuses without permission; for example, the Victoria and Albert Museum terms and conditions statement invites copying of low resolution Web site images for "personal use" and permits republishing of those images not in copyright on "non commercial" Web sites (Victoria and Albert Museum, n.d.) [15].

Another variation of posted terms and conditions is the use of Creative Commons licenses to control reuse. CI might employ creative commons licenses to try to ensure attribution, limit commercial use, or preclude derivative uses of collection items [16].


Click-through controlled reuse: A smaller number of CI employ click-through licenses to contractually specify what reuses of works are permitted (Allen, 2009; Eschenfelder and Agnew, 2010).

Account controlled reuse: A number of CI are employing online user account registration systems, usually together with click through licenses, to control reuse. For example, the EVIA digital archive of ethnographic video requires users to register for an account and agree to terms of use statement that forbids downloading or reuse of videos in the collection (<http://www.eviada.org/>).

Negotiated permission: In traditional reuse control methods, reuse requires communication with CI staff and likely signing a paper license. For collection items that are sensitive in nature or have legal constraints, traditional negotiated methods may prove best for responsibly managing reuse. While more resource intensive than the computer mediated permissions systems described above, negotiated permissions arguably allow a greater amount of control.

No digitization: For highly risky collection materials, avoiding digitization is a common method of avoiding problems. In these instances, reuse would require a

physical visit to the CI and negotiation with the CI and rights holders about creating and using copies.

We hope that this paper will spur greater understanding among stakeholders about the issues and value conflicts inherent in reuse of digital cultural collections. Freeing collection materials for reuse in new digital cultural production is important, and CI should seek to increase the materials available to the public in commons collections. On the other hand, legal and ethical constraints still apply to many CI collections and in some cases access and use controls may be appropriate. We believe that more conversation about when restrictions on access and reuse are appropriate is badly needed, and we hope that this article helps to spur that conversation. 

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Notes

1. This paper focuses primarily on the issue of permissions for non-commercial use; however for those interested in the fees debate, it provides citations to further discussion of fees for non-commercial use. The issue of permissions and fees related to commercial use of digital collections items is beyond the scope of this paper.
2. The debate about fees charged for non-commercial/non-profit reuse is covered elsewhere (Beilstein, 2006; Max Planck Institute for the History of Science, 2009; 2008; Tanner, 2003; 2004).
3. Publishing of orphan works is typically justified under fair use because no blanket exemption for digitization of orphan works currently exists. Because fair use is a case-by-case exemption based on the four fair use factors, each fair use digitization decision (*i.e.*, this book, that photo) represents a separate possibility for a copyright violation complaint. Dryden's (2008) study suggests many archives are unwilling to take this risk.
4. For example, Cornell's project is limited to public domain works, and the Victoria and Albert Museum's project is limited to public domain works or works where the "rights-holder has given permission" (Victoria and Albert Museum, n.d.).
5. Random samples of CIs, such as those featured in Institute for Museum and Library Services Digitization Surveys, tend to be conservative in their use of technology and many institutions have few (if any) digital collections.
6. We examined the programs of the following conferences for presentations on digital collections: ICHIM (2005, 2007), Museums and the Web (2006, 2007), WebWise (2006, 2007), Society of American Archivists Annual Meeting (2005, 2006), Open Repositories (2006, 2007), Museum Computer Network (2006, 2007), Computers and Libraries (2006, 2007), ARSC Association of Recorded Sound Collections (2006, 2007), Association of Moving Image Archivists (2006, 2007), Mid-Atlantic Regional Archives Conference (2006, 2007),

Joint Conference on Digital Libraries (2006, 2007).

7. The list excluded dark archives, commercial providers of digital cultural collections (e.g., ARTstor), and archives, libraries and museums within commercial organizations.

8. For more details on the survey methodology, and a copy of the survey instrument and cover letters, see K.R. Eschenfelder, "Controlling access to and use of online cultural collections: A survey of U.S. archives, libraries and museums for IMLS" (March 2009), University of Wisconsin–Madison, School of Library and Information Studies, at <http://minds.wisconsin.edu/handle/1793/38251>.

9. All numbers reported have been rounded to the nearest whole number.

10. Our data on materials in controlled collections largely parallel the results of the IMLS digitization survey except in the second most common materials type for academic libraries. Our data show academic libraries having a more controlled collections of manuscripts, artistic works, thesis and dissertations while the IMLS survey results rank course materials and information on the institution as the second most popular materials type. This difference may stem from our focus on unique cultural collections and our exclusion of class information (e.g., courseware materials) and licensed class materials (e.g., e-reserves) from consideration in the survey.

11. At the time of this study, the IMLS index listed 131 social studies collections, and 28 arts collections. See <http://imlsdcc.grainger.uiuc.edu/collections/GemTopPlusSubs.asp>.

12. CC Attribution 3.0: allows all uses including further distribution with attribution in a manner specified by the licensor. Existing fair use/fair dealing, moral rights and privacy rights are unaffected by the license and any of the other licenses listed below.

13. The question of the cost–efficiency of licensing is complicated by the lack of quality data about how much is spent supporting internal licensing processes (Tanner and Deegan, 2003; Tanner, 2004).

14. Smithsonian, 2009b, p. 21.

15. As noted earlier, many of these terms of use statements have been critiqued for attempting to exert control over public domain images that arguably should be free of all controls.

16. CC Attribution 3.0: allows all uses including further distribution with attribution in a manner specified by the licensor. Existing fair use/fair dealing, moral rights and privacy rights are unaffected by the license and any of the other licenses listed below.

CC Attribution Non Commercial 3.0: Similar to the above Attribution license, but does not allow commercial reuses. The no commercial use term could be waived by the license holder as part of a separate license for commercial use. For example, a version of this license is used by the New Jersey Digital Highway collection.

CC Attribution No Derivate Works 3.0: One can copy, share and distribute the work as long as the licensor is attributed in the manner specified by the licensor and as long as you do not alter, transform, or build upon the work.

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