The Player-Authors Project

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The Player-Authors Project

Summary Report of Research Findings

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Introduction

The Player-Authors Project

The Player-Authors Project was a yearlong research project funded by the National Science Foundation. The project used empirical methods to investigate how contemporary user-generated content (“UGC”) platforms and practices related to United States copyright law. The motivation for the project was the relative absence of data about the copyright status of most UGC and competing claims about UGC’s predominant nature.

A major portion of the project focused on platforms hosting UGC related to interactive media, i.e. video games. Scholars studying UGC have often singled out video games as an important component of UGC practices. Gaming communities have historically engaged in a wide range of “modding” and fan work not directly enabled by game software (Newman, 2008). Many of today’s games offer complex UGC affordances through which players create and share new content with each other. However, to date there have been no broad empirical investigations of the copyright law implications of game-related UGC practices. There have also been very few empirical investigations of the copyright law implications of UGC generally.

The Player-Authors Project fills this gap in the literature by providing two forms of data:

1. The research team employed random sampling to obtain snapshots of UGC production on a range of UGC platforms, including photo-sharing sites, a 3-D printing site, sites for sharing visual artwork, and a variety of game-related UGC sites. The team sampled the outputs of thirty content populations on sixteen distinct platforms. The collected samples were then described along several dimensions, including an analysis of the potential copyright implications of each item sampled.
2. The research team conducted two online surveys. One survey was taken of a population of 411 video game players. Another survey was taken of 46 video game industry professionals, including game developers. Both surveys sought information about the nature of participant UGC practices, opinions about UGC, and motivations for creating UGC.

This Summary Report provides an overview of our research findings.

Our research team consisted primarily of law school students having legal training in intellectual property law. Additionally, several members of the research team had experience in video game design, empirical research methods, new media and game studies literatures, and intellectual property theory. Research was conducted between September 2012 and August 2013, with the majority of the data obtained during the spring and early summer months of 2013.
Highlights of Research Findings

Platform Samples

• The copyright implications of UGC populations vary from platform to platform. While almost all UGC practices raise some copyright issues, referential practices on popular platforms vary widely, even within specific genres of UGC.

• The majority of UGC on most platforms we surveyed appeared to be wholly original and non-infringing. Very little “piracy” (copying of original works wholesale) was noted. If the populations we surveyed are representative of UGC generally, UGC practices should be understood as primarily generative of original works of authorship rather than primarily a form piracy or the creation of derivative works.

• In populations where we examined recent UGC production, referential practices did not generally correlate with increased popularity of the items sampled. However, our samples of UGC with the highest levels of popularity tended to exhibit significantly higher levels of referential practice. In other words, the works that were the most popular were more likely to be fan (derivative) works.

• A surprisingly small fraction of the UGC surveyed constituted “remix” creativity of the sort that criticized or parodied a referenced work. Scholarship on UGC often celebrates parodies, but the majority of fan works did not criticize the referenced original.

• Simple and less flexible UGC tool sets seem to correlate with a decrease in copyright issues. Conversely, more flexible tools and “denser” forms of authorial production correlated with higher levels of copyright issues.

Player and Game Industry Surveys

• A large number of video game players create and enjoy UGC, though only about half of players have shared their creativity with other players online.

• Players engage in a wide range of creative practices with respect to video games and have a wide range of motivations for doing so. UGC practices and motivations differ substantially according to variables such as age, education, and gender.

• Players who prefer to use personal computers, as opposed to gaming consoles, generally have a higher level of engagement with UGC.

• Professionals in the video game industry believe that UGC is a growing trend, but they have very diverse views regarding the copyright implications of UGC. On average, most professionals believe that players are less interested in UGC than the players actually report.
A Primer on User-Generated Content

In order to understand the relevance of the data collected in the Player-Authors Project, it is important to first understand the definition of UGC and the relevance of UGC production practices for intellectual property law and policy. Emerging UGC platforms (such as blogs, Facebook, YouTube, and Wikipedia) are clearly economically and culturally significant. They are the focus of popular and political attention and they represent one of the major technological developments of the last decade. Even those not familiar with the term “user-generated content” are usually familiar with the phenomenon the term describes.

The following pages offer a Primer on UGC, primarily referencing academic work in the humanities that evaluates the legal and cultural policy implications of UGC. The literature concerning UGC is already voluminous. UGC has been the subject of multiple books (from a variety of disciplinary perspectives), thousands of academic articles, and several commissioned reports to governmental bodies. This Primer cannot do justice to the full range of research and writing on UGC, but is simply intended to make the novice reader aware of the diversity of scholarship on the issue.

This Primer has two sections. The first section offers a brief discussion of the concept of “user-generated content” and its technological and historical roots. A second section provides a general overview of academic writing on UGC, highlighting some of the dominant discourses that praise and criticize UGC practices.

A Brief History of User-Generated Content

The use of computers and computer networks for collaborative creativity is part of the history and motivation for computing itself. Early visionaries such as Vannevar Bush (1945) and J.R. Licklider published papers and conducted research that led to today’s contemporary Internet (Hafner & Lyon, 1996). One of the primary motivations of these engineers was to facilitate the collaborative creation and distribution of information through massive and decentralized digital networks. However, it took some time for the technology envisioned to reach the general public. As early as the late 1960’s, a select few were creating and exchanging information through collaborative digital networks, but the general population of the United States depended on broadcast media for news and entertainment (i.e. newspapers, radio, and television).

By the start of the 1980’s, interactive computing and networking technologies had reached a significantly broader demographic. Hobbyists initiated much of the early growth of popular computing in the 1970’s (Zittrain, 2008, pp.1-3). Hobbyists and early entrepreneurs often adopted business and academic computing technologies for new and unintended uses (e.g. video games). At this point, it was already clear to some observers that the technological trajectory pointed toward a future of intense public interaction via digital information networks.
In 1980, for instance, futurist Alvin Toffler predicted a new “de-massified” media. He explained that viewers would soon use interactive technologies to vote on amateur talent contests (c.f. American Idol), book tables at restaurants (c.f. Open Table), and interact with politicians (c.f. Whitehouse.gov). In the course of this prediction, Toffler pointed for support to the emerging medium of video games, which he claimed changed audiences “from passive receivers to message senders as well. They are manipulating the set rather than merely letting the set manipulate them.” (Toffler, 1980, pp.163; Kline et al., 2003.)

This notion—that new digital technologies could enable the public to participate in what was formerly a broadcast medium—is the core concept of UGC. The term “user-generated content” can be found in academic use as early as 1989, when Professor Carrie Heeter used IT to describe how new media technologies might impact traditional theories of communication. Mirroring Toffler’s prediction, Heeter explained that the traditional “one-way transmission” model seemed incongruous with the popular use of personal computers and phone lines to create computer bulletin board systems or BBS’s. In such systems, said Heeter, users, not broadcasters, produced the content that made these systems valuable:

> With some new technologies, users actually act as an information source, providing information that is carried on a media system to other users. Broadcast television carries virtually no user-programmed content... Electronic bulletin boards, on the other hand, are computer-based systems that link users by telephone to public message databases comprised almost entirely of **user-generated content**. (Heeter, 1989, 224 (emphasis added)).

By the mid-1990’s, the World Wide Web had been developed and was becoming increasingly popular with the public. The commercialization of the Internet and the increased prominence of companies like AOL and CompuServe made it clear that emerging business models could take advantage of interactive media. The term “user-generated content” was used (albeit rarely) to describe the novel dynamics of the dot-com economy. For instance, in 1995 *Billboard* magazine article, an analyst from Forrester Research explained the success of a website might be gauged by “the volume of user-generated content” that the site hosted (Gillen, 1995). The article equated UGC with early textual forms of user productivity, such as discussion lists and chat rooms (Rheingold, 1993).

In the following years, as the power of personal computing, the size of the Internet, and the storage and transmission capacities of networks increased, so did the commercial and venture capital interest in UGC platforms. In many academic articles on UGC, the cover of *Time* magazine in 2006 is cited as a watershed moment, with *Time* anointing “You” as “Person of the Year” and the new controller of the media landscape. 2006 was also, not coincidentally, the year that Google purchased YouTube for over a billion dollars. *Time* cover neatly fulfilled Toffler’s prediction of a de-massified media. The text of the article suggested many other ways in which the public was producing and sharing content available online:
We made Facebook profiles and Second Life avatars and reviewed books at Amazon and recorded podcasts. We blogged about our candidates losing and wrote songs about getting dumped. We camcordered bombing runs and built open-source software.…

Who are these people? Seriously, who actually sits down after a long day at work and says, I’m not going to watch *Lost* tonight. I’m going to turn on my computer and make a movie starring my pet iguana? I’m going to mash up 50 Cent’s vocals with Queen’s instrumentals? I’m going to blog about my state of mind or the state of the nation or the steak-frites at the new bistro down the street? Who has that time and that energy and that passion?

*Time’s* notions of online productivity included videos, musical mash-ups, blogging, book and restaurant reviews, open-source software, Facebook, Second Life, and Wikipedia. As the Google Ngram graph at right (Figure a) suggests, while an increased discourse on “user-generated content” preceded 2006, the publication of *Time’s* issue coincided with a rapid spike in book publications that employed the term. As the graph also shows, the increased use of the term “user-generated content” tracked with increase use of various related terms and phrases, such as “Web 2.0” and “peer production.”

It is worth noting that while “user-generated content” is probably the leading term used to describe the phenomenon of popular digital creativity, many contemporary writers use alternative terminologies. There are certainly reasons to criticize the phrase “user-generated content.” The term “user” was borrowed from the discourse of computer science, where it connotes the end-user of a particular technology, i.e., a personal computer. The term “public,” “consumer,” “audience,” or “amateur” might all serve as better alternatives. Additionally, given that all artistic and authorial creators are “users” of some forms of technology, the term arguably makes a fetish of digital technologies. Traditional broadcasters are also “users” insofar as they use creative and broadcasting technologies to convey their messages. The term may therefore unjustly marginalize the authorial activities of the general public.

The term “content” can also be criticized, as it reflects a particular cultural and technological history. Heeter (1989) used the term to emphasize how bulletin boards offered a new form of media competition to existing broadcast technologies, challenging the assumptions of broadcast-centered communication theories. The term “content” maps well to broadcast technologies. In broadcasting, information is costly to produce and is marketed to the public, much like the valuable “content” contained in a packaged commodity. Yet the term has been attacked for misrepresenting the nature of popular Internet-based communications. John Perry Barlow, for instance, states:
The new meaning of the word “content” is plain wrong. In fact, it is intentionally wrong. It’s a usage that only arose when the institutions that had fattened on their ability to bottle and distribute the genius of human expression began to realize that their containers were melting away, along with their reason to be in business. They started calling it content at exactly the time it ceased to be (Barlow, 2008).

To build off Barlow, it should be observed that people do not usually refer to their private conversations with friends as the mutual exchange of “content.” Therefore, when conversations and information sharing occur online, it isn’t immediately clear how or why such communication becomes “content.”

Given that UGC is not a perfect term, it was perhaps inevitable that numerous alternative terms were invented to describe UGC and related phenomena. Perhaps the leading challenger is “Web 2.0,” a term which originated in the early years of the twenty-first century. But there are many other neologisms. As Le Borgne–Bachscheidt et al. (2008) explain:

There is no single and common definition of user-created content. The concept is either referred as “user-created content” or “user-generated content” or “amateur content”, etc., or is analysed as being part of a larger concept which could be the one of “Web 2.0” or the “Internet2.0”, the “participative web”, “the social Internet” or the "social media platforms."

Andres Guadamuz (2011) adds this gloss to the terminological confusion:

Peer-production is a term that is often used interchangeably with other concepts that describe the creation of intellectual works by members of the public instead of the professional industries that have dominated for more than a century. You will hear the phenomenon described interchangeably as user-generated content (UGC), and even the so-called Web 2.0. UGC is usually used to refer to the actual content created by users, as the name clearly indicates; while Web 2.0 is often defined as the set of tools used to create such content.

In addition to UCC, Web 2.0, peer production, the participatory web, and social media, other UGC-related terms include “amateur media,” (Hunter et al., 2012), “mass amateurization” (Shirky, 2002), “participatory culture” (Jenkins, 2006), “produsage” (Bruns, 2008), “remix culture” (Lessig, 2008), “generativity” (Zittrain, 2008), and “configurable culture” (Sinnreich, 2010). This profusion of terminology surely introduces some confusion into the controlling definition of UGC (and its synonyms). In some cases, UGC appears to refer to any information of commercial value that might be created by those who use digital technologies, including, e.g., search histories, browsing behaviors, and geo-location data. At this extreme, UGC is hard to distinguish from commercially-motivated surveillance. A more narrow (but still capacious) definition would be the following from the European Organisation for Economic Co-Operation and Development:

(i) content made publicly available over the Internet;
(ii) which reflects a “certain amount of creative effort”; and
(iii) which is “created outside of professional routines and practices” (OECD, 2007).
Taking this as a working definition, the next section of this Primer will provide an overview of how scholars from various disciplines have approached and evaluated the political, economic, and cultural salience of UGC.

Scholarship on User-Generated Content

Relation to Past Practices

One of the first questions most researchers of UGC address is what, if anything, about this phenomenon is genuinely novel? Often, critical analysis of UGC traces the continuity of UGC with prior social practices (Hunter et al., 2012; Le Borgne–Bachschmidt et al., 2008).

Activities like podcasting, blogging, and online video are certainly novel from a technological perspective, but non-professional creativity was not born with the advent of YouTube. There were (and still are today) “amateur hours,” letters to the editor, talk radio programs, “man on the street” interviews, game shows, fan clubs, and other popular modes of including non-professional work on broadcast media (Hunter et al., 2012). Precursors of UGC include fanzines, newsletters, personal correspondence, arts & crafts circles, sketchbooks, amateur art exhibitions, family albums, and similar marginal and non-industrial forms of media. (See, e.g., Buckingham (2011) on home video recording practices.) Indeed, as David Hesmondhalgh explains, it is a condition of being human to engage in symbolic production. Hesmondhalgh distinguishes “media production” as those creative activities that reach “audiences of millions.” (Hesmondhalgh, 2006.) Of course, the vast majority of blogs, YouTube videos, and Facebook posts do not reach large audiences (even if they could, in theory).

It is certainly possible, of course, that more and richer creative content is being produced today. During most of the twentieth century, the substantial cost of physical media (e.g. film, paper, paint) and creative technologies (cameras, editing equipment, sound mixing boards) made the authorship of certain media expensive. Today, the cost of making certain forms of creative work has fallen drastically due to digital tools. This should, logically, lead to some level of increase in the recording and production of authorial works (Neff et al., 2010). To reference the possibility posed by Time, making a quality video of an iguana may indeed be an attractive alternative to a person considering watching television. Of course, such claims also have a history. As Merrin (2013) explains, much of the celebratory discourse concerning YouTube and UGC parallels claims made by Shamberg (1971) about the new political and creative potentials of “guerilla television,” a creative practice enabled by the popular diffusion of cheap video-recording equipment.

Whether or not UGC represents a change in the time the average individual spends on creative work, it certainly represents a shift in the capacity of the average person to access a broad spectrum of creative works produced by the general public. An average American household in the 1980’s would have had access to various broadcast media, some textual works (e.g. books and magazines), and the repositories of public libraries. However, access to information was restricted by the technological limits of broadcast and the sheer weight of physical media.
Today, the average smartphone or laptop computer can access trillions of UGC works at negligible cost. As Hunter (2006) has explained, many Americans with access to Internet information now live in an environment of “infinite content.” Content is not infinite in the mathematical sense, but infinite in the practical sense that there are now more blog posts, photographs, sounds, podcasts, and videos freely available via the Internet than any individual – indeed, more than many thousands of individuals – could realistically read, watch, or listen to in a lifetime. Taking YouTube as the leading example, at present more than three day’s worth of video content is added to YouTube every minute.

Copyright law in the United States has always been premised on the belief that the government must grant authors exclusive rights in their creative works in order to provide incentives for authorial productivity. However, content scarcity—the social problem which copyright law seeks to address, is arguably not the most pressing problem for society today. More pressing problems appear to be attention scarcity, information quality, and the way our information consumption practices are shaping our culture (e.g. Turkle, 2011).

The United States is the home of many of the most popular UGC platforms: Wikipedia, Google, YouTube, Blogger, Facebook, and Twitter are all based primarily in the United States. Oddly, however, the government of the United States has largely ignored the copyright-related dimensions of UGC. The European Union has been relatively more interested in mapping emerging UGC practices, and has commissioned two major reports on the phenomenon. (OECD, 2007; Le Borgne–Bachschmidt et al., 2008). McNally et al. (2012), summarizing the landscape of UGC based on work done for the Canadian government, describe the copyright questions raised by UGC as follows:

UGC undermines the traditional dichotomy between the creator and the end user. In economic terms, the previously clear differentiation in roles between producer and consumer as well as between waged labour time and unwaged leisure time are increasingly blurred. The proliferation of transformative UGC, new creative works that are created through combining and transforming existing content, blurs traditional copyright policy distinctions to the point where traditional notions of authorship, ownership and infringement are fading in relevance…

Though UGC presents a challenge to policy-makers, it is imperative to have a properly balanced policy framework that will not only encourage UGC production and distribution, but allow such content to flourish. At the very least, policies should not inhibit the growing capacity for end users to engage in creative activities and cultural expression.

Legal Scholarship

Copyright scholars in the United States took some time to attend to the significance of UGC. Indeed, most late twentieth century discussions of the copyright implications of the Internet tended to ignore the phenomenon of UGC.
For example, Richard Chused’s edited volume *A Copyright Anthology: The Technology Frontier* (1998), contained over thirty excerpted law review articles on copyright and technology, the majority of which were published in the mid-1990’s. While the articles are diverse and erudite, none of them (at least as excerpted) focused on the rise of UGC as a significant issue for copyright law. Brian Kahin and Hal Varian’s collected essays in *Internet Publishing and Beyond: The Economics of Digital Information and Intellectual Property* (2000), was another volume of collected essays that included prescient discussions of the challenges facing online newspapers and mentioned the phenomenon of “freeware” software applications. However, none of the essays in that volume investigated the interplay of copyright law and user-generated content. The same year, the National Research Council published *The Digital Dilemma: Intellectual Property in the Information Age* (2000). This 300-page volume provided an excellent policy discussion of emergent online piracy problems and copyright in computer software, but said almost nothing about UGC. In short, at the turn of the last century, most writing in the United States about intellectual property law and the Internet paid very little attention to the general public’s authorial potentials.

There were, however, some exceptions. For instance, in 1997, Jessica Litman noted the “conventional wisdom” that “the content that is available today on the Internet—much of it created by amateurs—is so low in quality as to have little value except to its author.” (Litman, 1997, pp. 246-48.) Those who accepted this conventional wisdom, Litman explained, argued for new and stronger copyright laws in order to allow professionals to place their content online without fear of piracy. Litman, however, rejected that argument, noting that she had found much of the amateur content online to be valuable, and this led her to question whether stronger incentives were truly necessary to promote the distribution of valuable content online.

At about the same time, law student Eric Schlacter (now law professor Eric Goldman) explained how copyright law might be “unimportant” on the Internet, given various factors, such as the negligible price of information distribution and the dependency of Internet business models on advertising (Schlacter, 1997). Eben Moglen (1999), in the course of a general diatribe against the logic of intellectual property law, made a congruent claim that copyright law’s incentives were not necessary for the production of creative materials online.

In 2001, the Principal Investigator, relying on these sources, argued that the phenomenon of “free access” content should have important implications for copyright law (Lastowka, 2001). David Post, writing in 2001, similarly noted that while the Internet was conceded to be a zone of piracy, it seemed to be overflowing with original content. Post explained:

> It looks to me like the greatest outpouring of creative activity in a short span of time... that the world has ever seen.... I'm one click away from a lot of pretty interesting stuff. All at a marginal cost to me of zero. And all this without any substantial legal protection for that information at all (Post, 2001).

Yochai Benkler (2002) explained that collaborative and non-commercial practices were producing valuable forms of content online, an insight that he would later develop in his book *The Wealth of Networks* (2006). In 2004, Dan Hunter, in collaboration with the Principal
Investigator, provided a comprehensive account of how amateur practices were destabilizing the traditional processes of copyright law (Hunter & Lastowka, 2004).

There were certainly several other articles from this early time period that noted the emerging phenomenon of UGC and speculated on its implications for copyright law. However, legal scholarship on UGC was marginal before 2005. A major uptick in legal scholarship coincided with the increasing popular use of sites such as YouTube, Flickr, and Facebook. At this point, there is a substantial volume of legal scholarship on UGC. A recent search of Lexis.com in 2013 revealed over 700 law review articles and student notes that mentioned the term “user-generated content” and over 800 that mentioned “Web 2.0.”

Though it would be impossible to briefly summarize all that has been written in legal scholarship about user-generated content, it is worth highlighting a few of the important contributions and the work of those scholars who have published extensively on the topic.

Certainly the most popular critic of contemporary copyright law must be Lawrence Lessig of Harvard Law School. Lessig’s two popular press books, THE FUTURE OF IDEAS (2001) and FREE CULTURE (2004), drew on earlier academic criticism of intellectual property law by scholars such as Jessica Litman (1997), James Boyle (1997), Eben Moglen (1999), Peter Jaszi and Martha Woodmansee (1994), and David Post (2001). These two books, combined with Lessig’s first book, CODE AND OTHER LAWS OF CYBERSPACE (1999), poised him to be the leading public intellectual on the intersection of intellectual property and internet technologies. This confluence led to his primary book dealing with UGC issues, REMIX (2008). In REMIX, Lessig contrasted amateur and professional creativity, arguing that “amateur remix” should be exempted “from the scope of the rights granted by copyright.” Lessig argued:

\[
\text{[t]here is no good reason for copyright law to regulate this creativity. There is plenty of reason—both costs and creative—for it to leave that bit free. At a minimum, Congress should exempt this class of creative work from the requirements of clearing rights to create} \ (Lessig, 2008).\]

At least four other academic books concerning UGC and public policy were published at roughly the same time as Lessig’s Remix, and are commonly cited by scholars studying the phenomenon of UGC. These are Yochai Benkler’s THE WEALTH OF NETWORKS (2006), Jon Zittrain’s THE FUTURE OF THE INTERNET (2008), Clay Shirky’s HERE COMES EVERYBODY (2008), and Henry Jenkins’ CONVERGENCE CULTURE (2006).

Yochai Benkler and Jon Zittrain are both Lessig’s colleagues at Harvard Law School. Their approaches to UGC, however, are not tied so closely to criticisms of contemporary copyright law. Benkler (2006) frames UGC primarily as a form of non-commercial collaborative production and is interested in the political and economic ramifications of UGC. Zittrain (2008) is primarily interested in the interplay between the innovation benefits and the potential security risks of “generative” digital technologies. He frames UGC as one output of generative technologies, and discusses infringement of copyright law as a potential disabling threat to the diffusion of generative technologies.
Clay Shirky (2008) shares much in common with Benkler, in that he focuses on the political and cultural implications of collaborative media. Henry Jenkins (2006) is primarily interested in the practice of fans, and frames UGC as an extension of pre-digital fandom practices, which he has studied extensively in his prior work (Jenkins, 1992).

Rebecca Tushnet has written many legal articles that follow the themes of Jenkins, commenting extensively on fan cultures, intellectual property law, and UGC. Her work includes publications on: fan fiction and fair use law (1997); crediting practices by UGC creators (2007); the transformative practices of fan creators (2008); the legal salience of non-economic creative motivations (2009); anti-circumvention laws and video remixing (2010); and “viding” as a form of transformative fair use (2011).

Dan Hunter has also written several articles (occasionally in collaboration with the Principal Investigator) on user-generated content. His early work was largely descriptive of the phenomenon of UGC and its economic and political salience (Hunter & Lastowka, 2004; Hunter, 2004). He has also examined: law reviews as open access publishing (2006); amateur modalities of production (Quiggin & Hunter, 2008); and most recently co-edited and contributed to a book of essays, AMATEUR MEDIA (2012), examining various disciplinary perspectives on UGC.

Steven Hetcher has written several pieces on UGC: describing the phenomenon and its economics (Hetcher, 2008a); criticizing the use of exploitative contractual mechanisms by platforms such as Facebook (2008b); critiquing Yochai Benkler’s views of the economics of peer production and Wikipedia (2009); and similarly critiquing Rebecca Tushnet’s arguments about the economic analysis of fan fiction (2010).

Other legal scholars writing on user-generated content and United States copyright law include (to name just a few): Tom Bell (2008); Margaret Chon (2012); Niva Elkin-Koren (2010); Casey Fiesler (2009); Daniel Gervais (2009); Deborah Halbert (2009); Steven Jamar (2010); Edward Lee (2008); Michael Madison (2010); Alina Ng (2010); Erez Reuveni (2007); Carmit Soliman (2012); Carl Szabo (2011); John Tehranian (2011); Sarah Trombley (2007); and Mary Wong (2009).

In addition, there are (of course) a significant number of legal scholars working on the intersection of UGC and copyright law outside the United States legal system. See, e.g. Mira Burri (2010, 2011); Nobuko Kawashima (2010); Melissa De Zwart (2012); Samuel Trosow et al. (2010); Pamela McKenzie et al. (2012). Additionally, there are a large number of student Notes addressing UGC-related topics, e.g. McKay (2010).


Common themes in legal scholarship on UGC include: the challenges to copyright’s theory of incentives posed by user-generated content; the varieties of UGC works and their relationship to copyright law; the question of whether particular UGC practices should qualify as fair use; the potential liability of online intermediaries for infringing content; the need to reform
The question of how common terms of service agreements affect the rights of UGC creators.

Game Studies Scholarship on UGC

As Toffler (1980) noted, video games were one of the first forms of popular media that enabled consumers to control the action on the screen. Though creative online game play dates back to the 1970’s (Dibbell, 1999), the earliest video games had fairly simple structures. The first popular arcade machines, home consoles, and personal computer games were not connected to networks. Today, even when a game does not require a constant link to the Internet (as many do), it is still true that game-related resources will be posted on the Internet and the Internet will provide numerous sites for player community interactions (Consalvo, 2007; Newman, 2008).

From a copyright law perspective, even conventional player interactivity raises some novel issues. Courts deciding early video game cases were often confronted with claims that video game interactivity should essentially withdraw video games from copyright protection. In essence, the claim was that the player, not the game developer, was the author of what appeared on the game screen (Lastowka, 2014). Courts rejected this argument based on the view that game players’ authorial capacities were quite limited. As one court stated, a game player can only “choose one of the limited number of sequences the game allows him to choose.” *Midway Mfg v. Artic International*, 704 F. 2d 1009, 1012 (1983).

In recent years, a number of legal scholars have taken an interest in the various legal issues surrounding video games and in the historical trajectory of video game case law. Law professors Ashley Lipson and Robert Brain have co-authored a casebook on the law of video games (2009). Legal scholars such as Bruce Boyden (2011a, 2011b), Dan Burk (2009, 2010, 2013), Jon Festinger (2005), Jon Garon (2012), William Ford (2012), Tyler Ochoa (2012), and Erez Reuveni (2007) have all written articles on the intersection of video games and copyright law.


Scholars operating in the field of game studies often draw on the literature of media fandom (e.g. Jenkins, 1992). However, there are many game-specific creative practices, such as sharing play strategies, composing “walkthroughs” that explain how to win solo games, creating “skins” and “cheats” that change the appearance and nature of play, and providing other software modifications that enhance or alter the play experience (Consalvo, 2007; Kow & Nardi, 2010; Swalwell, 2012). Both historically and today, players have used in-game and out-of-game tools to
create their own original works (avatars, objects, and environments) that they share, by various means, with other players.

There is also a substantial overlap between the study of virtual worlds and the study of UGC practices in games. The monographs of TL Taylor (2006), Thomas Malaby (2009), Celia Pearce (2009), Tom Boellstorff (2009), and Bonnie Nardi (2010), are all primarily ethnographic studies of particular virtual worlds, but they provide significant insights into the productive practices of communities playing multi-player games. For example, in the context of some video games, players collaborate during game play, assisting each other and forming social groups like “clans” and “guilds” (often with elaborate Web-based systems of recruitment, governance, scheduling, and resource management) (Taylor, 2006).

Like the legal scholarship on UGC, the game studies scholarship on player productivity is voluminous and varied. Many game studies scholars write on broader issues of cultural policy, including intellectual property laws specifically (e.g. Postigo, 2012). What follows is a brief, non-comprehensive list of some of the major works on the intersection of game studies and UGC.

The writings of Sal Humphreys (Humphreys 2005a, 2005b, 2008, 2009, 2010; Humphreys et al., 2005; Banks & Humphreys, 2008) focus on various ways that players of massively multi-player games (“MMORPGs”) add value to those platforms. This entails discussions of UGC, but encompasses other forms of player labor. Humphreys’ work draws on the work of legal scholars like Yochai Benkler (2006) and Rosemary Coombe (1998) to explore questions surrounding the political potentials and implications of player co-creativity.

John Banks, who has co-authored papers with Humphreys, has explored similar topics (Banks, 2007; Banks & Humphreys, 2008; Banks & Deuze, 2009), with his earlier work based in part on ethnographic research conducted at Auran, an Australian game development company. Axel Bruns (2008) and Dan Hunter, mentioned above, are colleagues of Banks at Australia’s Queensland University of Technology and their work also touches on the intersection of UGC, games, and copyright policy.

Hector Postigo has also written extensively about UGC in games, with an emphasis on the work of video game modders. His writing borrows from criticisms of digital free labor and is informed by careful studies of specific modding communities. Postigo’s more recent work on game-based UGC focuses on the monetization of gameplay videos on YouTube.

Olli Sotamaa has written several papers about the productivity of video game players, including the efforts by the game industry to monetize UGC production. Sotamaa’s work synthesizes the existing literature on UGC and games to provide a rich, primarily formalistic account that locates UGC within both game studies theory and game design practice.

Hannah Wirman has also written extensively about player productivity in games (2008, 2009, 2011). Her work focuses on the practice of making avatar “skins” in The Sims and also explores the relationship between video game play and fandom.
The Principal Investigator has also explored various legal aspects of video games and player productivity (e.g. Lastowka & Hunter, 2004), as well as the deployment of UGC affordances in video games (Lastowka, 2008, 2012b).

Perceived Harms and Benefits of UGC

While much of the work mentioned above concerning UGC and copyright policy is descriptive and qualitative, many scholars in both law and the humanities have offered normative conclusions on the social benefits and harms of UGC. A summary of the most common policy arguments is set forth below, starting with claims of UGC’s benefits and then moving to claims of UGC’s harms.

A. UGC as Information Surplus

As noted in the early work on the legal salience of UGC, copyright law in the United States is a system designed to provide commercial incentives for the production of new content (Litman, 1997; Moglen, 1999; Lastowka, 2001; Post, 2001; Benkler, 2002). UGC therefore could be understood as an unexpected surplus of valuable content created without the need for copyright’s incentives. UGC fulfills the goal of copyright law—providing the public with access to new creative works—but generally does not entail the assertion of proprietary rights by original authors. UGC can be viewed as a serendipitous development. It fulfills copyright’s objectives (furthering social progress through the production of new forms of information) without relying on copyright law’s commercial incentives.

B. UGC as Democracy-Enhancing

By enabling more popular authorship, UGC brings a wider range of voices into the media landscape, something that would seem desirable in any democratic society. Indeed, given common academic critiques of the political economy of communications media, the availability of UGC may seem like a technological salvation from the perceived ills of the twentieth century media landscape. From a free market perspective, it should seem equally attractive, providing popular access to media technologies without direct state regulation of that process. Thus, enthusiasm for UGC can span the poles of the political spectrum. Indeed, in 1997, a unanimous United States Supreme Court made the following laudatory observation about the emerging popular use of the Internet:

Through the use of chat rooms, any person with a phone line can become a town crier with a voice that resonates farther than it could from any soapbox. Through the use of Web pages, mail exploders, and newsgroups, the same individual can become a pamphleteer. (Reno v. ACLU, 521 U.S. 844, 870 (1997)).

The 2007 European OECD Report on UGC summarized it political benefits similarly:

UGC can also be seen as an open platform enriching political and societal debates, diversity of opinion, free flow of information and freedom of expression.
Transparency and some “watchdog” functions may be enhanced by decentralised approaches to content creation. Citizen journalism, for instance, allows users to correct, influence or create news, potentially on similar terms as newspapers or other large entities. Furthermore, blogs, social networking sites and virtual worlds can be platforms for engaging electors, exchanging political views, provoking debate and sharing information on societal and political questions (OECD, 2007).

A closely related claim made by some UGC proponents is that popular access to broadcast media enables political communities to collectively oppose repressive or unresponsive regimes. Shirky (2008), for instance, claims social media technologies played a significant role in South Korean protests over imported beef, enabling the Korean public to achieve an unprecedented political outcome. Those claims resonate with more recent popular claims that the Internet and social media were crucial to the rapid political transformations of the Arab Spring.

**C. UGC as Diversity-Enhancing**

An additional benefit of UGC is that it enhances the diversity of content available in the media landscape, alleviating the long-standing complaint that mass media only serves to consolidate majority viewpoints and marginalize dissident voices. The 2007 European OECD Report explains how the “long tail” economics of UGC promote a substantial increase in diverse cultural content aimed at niche audiences.

The forms of diversity enabled by UGC are potentially as diverse as are the potential authors. UGC could contribute media content created by: geographically diverse populations (e.g. international exchanges, local community media, immigrant populations); religious, racial, and ethnic minorities; under-represented economic classes; and groups with marginalized beliefs, practices, and ideologies.

**D. UGC as Educational**

Many proponents of UGC have also claimed that the act of creating UGC is intrinsically beneficial: i.e. UGC creators benefit simply from participating in the sphere of public media. For instance, Jenkins argues that communities of fan fiction writers are teaching each other how to improve their writing and how to analyze the writing of others, stating that many fan fiction writers are eager to escape from their schools so that they can have the chance to work on their writing (Jenkins, 2006, 184-85). Lessig, similarly, claims that “Speaking teaches the speaker even if it just makes noise” (Lessig, 2008, p.132).

**E. UGC as Authentic**

Many proponents of UGC also claim that amateur media is superior to commercial content because it is not designed with commercial motives in mind. Commercial media, it is claimed, provides either content designed to be saleable or messages structured to goad audiences to act
as the speaker desires (i.e. advertising and propaganda). UGC, framed as exclusively amateur media, is seen as immune from the corrupting influence of markets. Benkler (2006) states:

Intense interest and engagement by small groups that share common concerns, rather than lowest-common-denominator interest in wide groups that are largely alienated from each other, is what draws attention to statements and makes them more visible. This makes the emerging networked public sphere more responsive to intensely held concerns of a much wider swath of the population than the mass media were capable of seeing, and creates a communications process that is more resistant to corruption by money.

Lobato and Fletcher (2012) quote a contemporary amateur music blogger who professes a similarly skeptical view of the negative influence of commercialization:

[We] have a very deliberate and reflexive policy of never monetising the blog or turning it into a going concern. This keeps it within a kind of gift economy, and helps us build genuine trust with the artists and readers who we respect. And this is worth much more than money...

F. UGC as Collaborative

Finally, many proponents of UGC celebrate the collaborative nature of UGC production, with many going so far as to identify UGC as an inherently collaborative phenomenon. Benkler (2006), for instance, celebrates “peer production,” which he defines as follows:

[The networked environment makes possible a new modality of organizing production: radically decentralized, collaborative, and nonproprietary; based on sharing resources and outputs among widely distributed, loosely connected individuals who cooperate with each other without relying on either market signals or managerial commands. This is what I call “commons-based peer production.”]

Likewise, Axel Bruns (2008) defines his coined term “produsage” as entailing collaborative production only.

Notably, many of the claimed benefits about UGC dovetail with one another. For instance, if UGC is more collaborative than prior media, it is also arguably more democratic in its process of production (Hoffman & Mehra, 2009). It may also be more educational, given that collaborative practice is sometimes lauded as a civic skill and educational virtue. And to the extent individuals are educated by collaborating in the production of a more diverse sphere of media, this can be seen as a desirable end in itself from the standpoint of democratic theory.

However, critical accounts of UGC also exist. A brief catalog of UGC’s (claimed) harms follows. Included are brief discussions of counterclaims that may mitigate these arguments.
A. UGC as Piracy

The traditional copyright industries (i.e. firms in the film, music, and publishing industries) were the primary parties responsible for the shape of copyright law throughout the twentieth century (Litman, 2006, p.25). For the most part, few major players in the copyright industries have offered comprehensive statements on the intersection of UGC and copyright law.

A notable exception is the 2007 “Principles for User Generated Content,” signed by several high-profile copyright industry leaders and technology companies, such as, e.g., CBS, Disney, Microsoft, NBC, Sony, and Viacom. The Principles suggest that the most significant legal issue surrounding UGC is the negative consequence of increased copyright infringement (Fiesler, 2008). In a law review article, Alan Braverman and Terri Southwick, two Disney lawyers and executives who participated in the creation of the Principles, summed up their personal approach to UGC in this way:

The phenomenon of enormous growth of UGC sites presented both a threat and an opportunity to copyright owners. UGC, of course, is not always user-generated; it would more accurately be called user-posted content. The threat is that a good percentage of the most heavily-viewed user-posted content is infringing. The opportunity is that UGC technology allows content owners to connect more directly and interactively with their consumers; both on such content owner’s own sites and on other UGC sites (Braverman & Southwick, 2009).

By suggesting that UGC is often merely “user-posted content” and worrying that “the most heavily-viewed user-posted content is infringing,” Braverman & Southwick effectively collapse their discussion of UGC with the problem of online piracy. UGC’s benefits are described as merely a means by which content owners can connect with “their consumers.”

Many law review articles and student Notes take a similar approach to that of the Principles, focusing on how UGC websites may or may not facilitate copyright infringement and how platforms may avoid liability or otherwise mitigate the dangers of hosting infringing content. Professor Steven Hetcher, for instance, has framed UGC platforms as an evolution from piracy platforms, explaining that the key difference between the two is the “proportion of infringing as compared to non-infringing content to be found on the sites.” (Hetcher, 2008a, pp.867-868).

It must be conceded that UGC platforms can obtain financial benefits from hosting infringing content. In his book FREE RIDE (2011), journalist Robert Levine suggests that copyright infringement fueled the early growth of YouTube and that the company strategically turned a blind eye to infringement in order to promote the platform’s expansion (Levine, 2011, pp.94-97). Levine argues that platforms for user creativity are inevitably platforms for user piracy, suggesting that it is in the interests of platform owners to ignore piracy if the law allows them to do this. If a certain percentage of UGC is, inevitably, infringing, the platforms that host UGC will logically reap the benefits of monetizing this content without paying the copyright holders for standard licenses. Although Rebecca Tushnet is a well-known defender of UGC creativity, she notes the problematic tension between the amateur motivations of many UGC creators and the commercial motivations of for-profit platforms (Tushnet, 2009).
Levine’s complaint is specifically against copyright infringements occurring on UGC platforms, but there are clearly great difficulties in distinguishing infringing content and lawful UGC. Le Borgne–Bachschmidt, et al., in their ambitious effort to provide data and policy guidance to the European Union on appropriate UGC policies, explained that they had failed to find a way to reliably distinguish between “amateur, legal professional and illegal professional content” on the UGC sites that they surveyed (Le Borgne–Bachschmidt, et al., 2008, p.29). Given that copyright law protects amateur works as well as professional works, even a clumsy hand-drawn sketch might constitute an infringement (if its reproduction and distribution were not licensed by the author). (This difficulty is discussed in more detail below with respect to the methodologies of the Player-Authors Project.)

Given that the presence of some infringing content on any user-generated platform cannot be technologically prevented, the struggle between content owners and platform owners can be reduced to a question of enforcement costs. The copyright industries complain that they lack the tools, expertise, and resources to constantly police a myriad of UGC platforms for piracy. They complain that platform owners, if they are not in league with pirates, are underinvesting in anti-piracy efforts to their detriment. The platform owners, on the other hand, view policing third-party rights as a tax on their net revenues, and explain that perfect enforcement is impossible. The “Principles” document therefore attempts to set forth some areas of agreement between content owners and platform owners. However, it should be noted that it is a document that focuses primarily on the problems of online piracy, not the potentials of UGC.

B. UGC as a Low Quality Content

Andrew Keen is recognized as one of the earliest and harshest popular critics of user-generated content. His book, THE CULT OF THE AMATEUR (2008) sets forth a collection of anti-UGC arguments in hyperbolic terms:

> Wikipedia has no reporters, no editorial staff, and no experience in news-gathering. It’s the blind leading the blind, infinite monkeys providing infinite information for infinite readers, perpetuating the cycle of misinformation and ignorance....

> YouTube eclipses even the blogs in the absurdity of its content. Nothing seems too narcissistic for these videographer monkeys. The site is an infinite gallery of amateur movies showing poor fools dancing, singing, eating, washing, shopping, driving, cleaning, sleeping, or just staring into their computers (Keen, 2008, 4-5).

Keen, in short, claims throughout his book that UGC is uniformly trivial, thoughtless, crude, unprofessional, error-laden, over-abundant, and narcissistic—among other things.

Jason Lanier, like Keen, describes himself as a disillusioned Silicon Valley veteran. His recent popular press book, YOU ARE NOT A GADGET (2010), has been celebrated by traditional media outlets and is (perhaps not coincidentally) highly critical of UGC and Web 2.0. While Lanier is a much more elliptical critic, his complaints often resemble those of Keen. He writes: “Online culture is dominated by trivial mashups of the culture that existed before the onset of mashups, and by fandom responding to the dwindling outposts of centralized mass media.” (Lanier, 2010,
He advises readers to “Write a blog post that took weeks of reflection before you heard the inner voice that needed to come out.” (Lanier, 2010, p.21.)

It must be conceded that these sorts of attacks on UGC seem to resonate with many people, who express dismay about the poor quality of UGC content. Keen is surely correct that UGC has a different character than professional media. The very concept of UGC is that a multitude of diverse voices (including less educated or entertaining voices) can speak without the intervention of cultural gatekeepers. While Keen and Lanier cast this as a flaw of UGC, many other commentators, as explained previously, celebrate it as a virtue.

C. UGC as Undesirable Competition

In THE CULT OF THE AMATEUR, Keen not only attacks the quality of UGC generally, but also explains that popular attention to UGC is “decimating” the traditional copyright industries.

The free, user-generated content spawned and extolled by the Web 2.0 revolution is decimating the ranks of our cultural gatekeepers, as professional critics, journalists, editors, musicians, moviemakers, and other purveyors of expert information are being replaced... by amateur bloggers, hack reviewers, homespun moviemakers, and attic recording artists. Meanwhile, the radically new business models based on user-generated material suck the economic value out of traditional media and cultural content (Keen, 2008, p.16).

Again, there is probably some truth to this point. If the amateur sphere does indeed compete with the professional sphere (Lastowka, 2001, pp.325-328; Lastowka & Hunter, 2004, p.968; Hunter & Quiggin, 2008, pp.45-47; Gervais, 2009, p.870), then UGC should operate as a market substitute for works previously sold and licensed under copyright. Every experience of a UGC work might be seen as a lost sale for a professional work. To take a well-traversed example, if the general public believes (whether it is true or not) that Wikipedia is a roughly comparable substitute for the Encyclopedia Britannica (Benkler, 2006, p.71; Lessig, 2008, pp.160-162), where an average citizen can find generally reliable basic information about an obscure topic, then it follows that there will be fewer purchasers of Encyclopedia Britannica.

This well-known example can be extended to multiple copyright industries: if newspapers can obtain quality digital photography from amateurs, there might be fewer opportunities for professional photojournalists. If blogs, Twitter, and Facebook are a substitute for reading newspapers, there might be fewer newspapers. If audiences prefer reading fan fiction to buying new books, this could conceivably cut into the revenues of professional authors and publishers. If people prefer watching amateur videos on YouTube to watching network television, viewer numbers and advertising revenues for the major networks might drop.

If consumers express a preference for UGC over traditional content, this should not necessarily be a bad thing. If consumers can now obtain valuable information for free rather than paying for it, UGC is arguably generating popular wealth (previously spent on traditional media purchases) and freeing up capital for investment in other sectors of the economy. The Shumpeterian destruction of copyright’s industrial empire could open up the door to some new,
more efficient economic model. Keen’s argument on this count seems to be tied, therefore, to his prior elitist argument—the traditional industries are being destroyed by UGC and the resulting media landscape is one that is not culturally desirable. Essentially, to the extent that consumers prefer UGC, Keen argues they need to be protected from their own preference for easily available but qualitatively inferior content, an approach with troubling implications.

However, there are more sophisticated criticisms of the impact of UGC on the creative economy. David Hesmondhalgh, for instance, worries that the rise of user-generated content may lead to a loss of full-time, satisfying employment for workers in the creative industries. While Hesmondhalgh acknowledges that UGC creation is generally rewarding for those who engage in it, he notes that those who engage in UGC production generally have day jobs (Hesmondhalgh, 2012, p.145) and that we may be concerned about the loss of some opportunities for full time work in the creative industries.

However, it is hardly clear that UGC has indeed decimated the creative industries as Keen claimed it would. Five years after Keen’s diatribe, professional and commercially-motivated firms are still making and selling professionally produced news, music, movies, books and other copyright-protected media. While the creative industries are struggling to adapt to the online environment, it is quite possible that newspaper subscriptions, for instance, would be declining without the UGC contributions of bloggers.

Also, the notion of the “traditional creative industries” itself is problematic, since media production and audience practices have changed in significant ways throughout the decades of the twentieth century. The United States publishing industry, the motion picture industry, and the recorded music industry, for instance, all have very separate histories. Various entertainment industry business models and practices underwent boom and bust cycles throughout the twentieth century. It seems unfair, therefore, to blame UGC for all the challenges faced by professionals working in today’s creative industries.

**D. UGC as Exploitation**

Over a decade ago, long before Web 2.0 arrived on the scene, Tiziana Terranova (2001) expressed concern over online business models that exploited amateur creativity and user labor. Applying a Neo-Marxist framework to analyze the phenomenon, Terranova characterized UGC as a form of exploitation that was willingly embraced by the consumer class:

> The volunteers for America Online, the NetSlaves, and the amateur Web designers are not working only because capital wants them to; they are acting out a desire for affective and cultural production that is nonetheless real just because it is socially shaped….

> In the overdeveloped countries, the end of the factory has spelled out the obsolescence of the old working class, but it has also produced generations of workers who have been repeatedly addressed as active consumers of meaningful commodities. Free labor is the moment where this knowledgeable consumption of
culture is translated into productive activities that are pleasurably embraced and at the same time often shamelessly exploited.

Terranova’s central observation was, essentially, a critical take on UGC: the “content” produced by “users” could be characterized as free labor providing new revenues to platform owners. This claim has become a dominant concern among many critics of UGC platforms (Scholz, 2013). Nick Carr, for instance, noted how many online platforms provide “terms of service” that permit them to monetize the valuable contributions of the public:

Web 2.0’s economic system has turned out to be, in effect if not intent, a system of exploitation rather than a system of emancipation. By putting the means of production into the hands of the masses but withholding from those same masses any ownership over the product of their work, Web 2.0 provides an incredibly efficient mechanism to harvest the economic value of the free labor provided by the very, very many and concentrate it into the hands of the very, very few (Carr, 2006).

The Principal Investigator has made similar claims with regard to UGC and copyright law particularly (Lastowka, 2008, 2012c). Simple claims of exploitation, however, risk oversimplifying the complex relationship between market and non-market social relationships—as Terranova herself observed. Given that platform contributors may be well-aware of the value of their free labor, they can, presumably, choose whether or not to provide it. As Banks and Humphreys (2008) argue:

The intersection and co-evolution of these two economies (the social/affective and business) produce not outright exploitation of unpaid labour by capital, but a terrain of negotiation and power relations quite different from those of industrial era production.

Ultimately, discussions regarding the social justice of UGC commercialization can be challenging to parse, since they lie at the intersection of numerous socially constructed concepts, e.g.: the separation of labor and leisure; the impropriety (or propriety) of “free riding” on the labor of other; the proper limits of techno-political power; and claims of false consciousness. David Hesmondhalgh explains that the “exploitation” of UGC is not really commensurable with the “appalling conditions and pay in Indonesian sweatshops.” (Hesmondhalgh, 2012). He argues that in order to evaluate the impact of UGC on the creative industries, we must determine whether emerging UGC practices contribute to “social justice and the distribution of possibilities for living a good life.”

E. UGC as Audition

Finally, contrary to all the critiques above, some commentators suggest that UGC is not inherently non-commercial. While many early commentators described UGC as primarily consisting of amateur and non-commercial production (Hunter & Lastowka, 2004; Benkler, 2006; Lessig, 2008), the relationship between UGC and commercial media today has grown more complex. As Hetcher (2012) explains, the majority of UGC platforms today are commercially-motivated enterprises, not altruistic collaborative institutions like Wikipedia. If
UGC platforms depend on advertising revenues or other traffic-related business models, they have a motivation to provide UGC creators with something valuable in return for their creative labor. Some provide awards or revenue-sharing, effectively employing their users. As Jean Burgess (2012, p.55) notes, it appears that some platforms, such as YouTube, are eager to “professionalize” their amateur producers. A growing number of UGC sites, such as Threadless (Brabham, 2012), offer similar commercial enticements to popular creators. And though crowdfunding sites like Kickstarter may not offer UGC per se, they clearly represent more decentralized modes of creative production. The success of a creative artist’s Kickstarter campaign may constitute “professional” creativity, but it still represents a significant shift in how creators can choose to conduct their careers.

Even those amateurs who do not obtain financial benefits from UGC may count the prospect of potential income among their motives for creativity. (Notably, our own survey confirmed the existence of this motivation among our UGC-producing respondents.) Certainly, there are more than a few examples of popular artists (e.g., Justin Beiber) who initially distributed their work for free and then leveraged their popularity on UGC platforms to ultimately obtain professional careers. (Notably, our survey of the game industry indicated that 75% of game industry professionals were aware of someone who found a position in the industry due to their prior production of UGC.)

However, acknowledging that UGC exists in a complex and dynamic relationship with future commercialization should not lead us to gloss over the important differences and the complex relationships between commercial and non-commercial UGC practices. As Viviana Zelizer and Margaret Radin have noted in their work, markets based on “social currency” are often significantly different markets, both socially and legally (Zelizer, 1994; Radin, 1996). When commercial exchanges emerge in communities where non-commercial exchanges previously were predominant, those new markets can degrade the quality of social relations and “crowd out” more altruistic motivations for behavior (Benkler, 2006; Quiggin & Hunter, 2008).

**Conclusion**

This Primer is intended merely to introduce the concept of UGC to the reader and to summarize some of the leading theoretical debates surrounding it. As this Primer has explained, the growth of UGC poses significant questions for copyright law and for information policy generally. While many commentators celebrate the benefits that UGC can bring to our media landscape, there are also those who are critical of its growth and social prominence.

The Player-Authors Project contributes to this ongoing debate over UGC primarily by providing new data on popular UGC practices and examining how these practices relate to copyright policy. The next section explains the project’s motivations and the methodology used to obtain the data presented.
Project Motivations and Methodology

Motivations

As discussed in the Primer above, legal scholars and policymakers have taken various approaches to the phenomenon of UGC. They have characterized UGC production in a variety of ways. We might simplify this diversity by highlighting three divergent rhetorics in UGC discourse. Some commentators frame UGC practices as primarily about infringement and the problem of UGC platforms hosting piratical content. For instance, Braverman & Southwick (2009) state: “The threat is that a good percentage of the most heavily-viewed user-posted content is infringing.” A second strand of rhetoric, most prominent in the work of Lessig (2008) and Jenkins (2006), frames UGC practices as dominated by “amateur remix”—non-commercial mashups, parodies, and other forms of fan creativity that borrow substantially from existing works while transforming their meaning. Thirdly, there is a strand of work on UGC, most notable in Bruns (2008) and Benkler (2006), that frames UGC primarily as the collaborative production of original and competing information goods (e.g. Wikipedia vs. Encyclopedia Britannica, Linux vs. Windows 7).

Each of these three frameworks can easily draw on numerous examples of UGC that match to the rhetoric in question. Browsing on YouTube videos, BitTorrent, and other UGC platforms, there are certainly instances that can be found of wholesale reproductions of copyright-protected content. However, one can also locate an abundance of satirical and pointed remixes online that critically comment on copyright-protected works while borrowing some of their elements. And finally, there are an abundance of collaborative, non-commercial, “peer produced” UGC projects that raise no significant copyright issues. The dominant rhetorical methodology of critical and cultural commentators on UGC has been to hand-pick specific examples of works that bolster their arguments, largely ignoring UGC practices that do not match the preferred rhetorical framework.

Another approach in legal commentary on UGC has been to focus attention on particular lawsuits relevant to UGC. There certainly have been several well-known and high-profile lawsuits in the United States that have explored UGC practices, like Lenz v. Universal Music, 572 F. Supp. 2d 1150, 1152 (N.D. Cal. 2008); Rowling v. RDR Books, 575 F.Supp.2d 513 (SDNY 2008); and Marvel v. NCSoft, CV 04-9253-RGK (C.D. Cal. Aug. 23, 2005). The Principal Investigator, like many others, has discussed these cases and others in his own scholarship (Lastowka, 2008, 2012a). Although it is certainly worth delving into these cases and exploring their specific facts, it is doubtful that the practices that typically give rise to litigation are representative of UGC practices generally.

So in short, most of the prominent accounts of UGC and copyright law have left unanswered a very important question: “What are people actually doing?” From the perspective of copyright law, are most instances of UGC creativity infringing? Are most people utilizing UGC platforms creating new and original works? How often do UGC authors create “remixes” and “mashups” of well-known intellectual properties?
There have been many empirically grounded investigations of UGC practices, but there have been very few studies that offer statistical evidence on how practices on UGC platforms intersect with copyright law. The OECD (2007) and Le Borgne–Bachschmidt et al. (2008), for instance, have authored reports on UGC practices that provide a considerable range of empirical and demographic data. Yet these studies specifically exclude any consideration of whether the UGC platforms studied host content that is original, derivative, or infringing. Books concerning UGC like Keen (2008), Shirky (2008), Jenkins (2006), and Levine (2011), provide information about a range of UGC practices and relate policy discussion to questions of copyright—but copyright questions are addressed broadly and primarily via anecdotal examples. Highly informative ethnographic accounts exist of particular UGC communities, and these works often investigate how UGC producers negotiate concerns about intellectual property. However, these studies are generally grounded in the discourses of anthropology, sociology, communications, and computer science, rather than copyright law.

As a result, while the existing literature on UGC is quite extensive, it provides very little data about how broader UGC practices intersect with the doctrines of copyright, despite a common complaint in the commentary that the law is in need of clarification. The two most comprehensive European policy documents on the phenomenon of UGC indicate that different copyright policy implications arise from UGC that is original, piratical, or remix (OECD, 2007; Le Borgne–Bachschmidt et al., 2008).

This question of proportionality is also important in United States copyright law doctrine (Hetcher, 2012). Several legal scholars and jurists have endorsed a general standard of proportionality as a litmus test for platform legality. In essence, the theory is that different legal consequences should follow when technological systems are primarily (rather than marginally) used for copyright infringement (Hetcher, 2012). This approach derives, in part, from the high-profile case of MGM v. Grokster, 545 U.S. 913 (2005), where six justices of the Supreme Court disagreed about whether the percentage of infringing and non-infringing works found on a peer-to-peer file-sharing system was sufficiently “substantial” to insulate the platforms from legal liability (pursuant to the Sony rule expressed in Sony v. Universal, 464 U.S. 417 (1984)).

However, even in Grokster, there was little robust evidence about the percentage of infringing works on the defendants’ networks. Roughly 90% of the content was assessed to be infringing, while 10% of the content was assessed to be undetermined; Justices Ginsburg and Breyer concurred separately, each writing for two additional justices, disagreeing as to whether this 10% could shield the platform from liability under the Sony rule. The Supreme Court ultimately resolved the Grokster case against the defendants on the basis that they had promoted the use of their platforms for piracy, inducing infringement. The vast majority of UGC platform providers do not encourage users to infringe—making the unresolved Sony question potentially quite important to these platforms, depending on how they are used.

The principal motivation of the Player-Authors project was to fill the empirical gap in our understanding of the copyright implications of popular UGC practices.
Project History

The Player-Author Project was funded by a National Science Foundation EAGER funding mechanism, which supports “Early-concept Grants for Exploratory Research.” EAGER grants are typically modest scale grants, often given to first-time researchers exploring interdisciplinary and non-standard research. According to the NSF website:

The EAGER funding mechanism can be used to support exploratory work in its early stages on untested, but potentially transformative, research ideas or approaches. This work could be considered especially “high risk-high payoff” in the sense that it, involves radically different approaches, applies new expertise, or engages novel disciplinary or interdisciplinary perspectives.

The project's methodology was constructed in light of the EAGER philosophy. The research team assembled during the first few months of the project, reviewed the existing literature, collected the basic equipment and software necessary for the project, and discussed the potential research methodologies that might augment our understanding of UGC phenomena. After discussing the immense range of contemporary UGC practices, the various theoretical understandings of UGC, and the leading arguments about copyright policy and UGC, we soon arrived at a preferred methodological style. We decided to adopt a “scouting” approach to the issues: favoring a fast and far-ranging survey methodology rather than narrowing our study to one particular community. We collectively compiled long lists of prominent UGC platforms and practices we might study, debating which communities and practices were the most interesting from the standpoint of copyright law, and how to maximize the diversity of practices included within the constraints of time and budget.

We rejected surveying some potentially interesting practices and platforms due to the difficulty they posed for either legal analysis or empirical approaches. In some cases, we started down research paths that were ultimately abandoned. For instance, we had initially hoped to sample populations of UGC from YouTube. However, after investigating YouTube's API and considering various approaches, we concluded that the opacity of the interface made it difficult to obtain a clear and quick picture of the copyright implications of general UGC practices on the platform. We also conducted an extended study of Reddit practices, gathering extensive metadata on how the platform was used at particular times. With Reddit, however, the copyright and UGC questions became quite challenging doctrinally, given that user contributions often consisted of links to publicly available content, peppered with short commentary. After a few attempts at coding the copyright implications of Reddit, we ultimately concluded that our standard methodology simply wasn't producing useful data.

We biased our selection of UGC platforms toward those platforms that let us obtain useful and quantifiable data more quickly. For instance, while the research team was very interested in investigating unauthorized and informal “modding” of games (Postigo, 2007, 2008, 2010; Scacchi, 2010; Targett et al., 2012; Poor, 2013), we decided to focus our study only on the mods made available on the Steam Workshop platform, since these mods were “low hanging fruit”—i.e. an easily accessible catalog of discrete works. The same preferences led us away from
studying, e.g., the creative practices of average Minecraft players operating on small, closed, private servers. Instead, we ultimately chose to study two platforms that aggregated large populations of Minecraft works (avatars and maps).

Gaming consoles turned out to be problematic. All of the leading console platforms at the time (the Wii, PS3, and XBox 360), did have games that offered players creative tools and enabled players to share creative content with others. However, we quickly concluded that the PC platform was much more conducive to producing accessible and sizable populations of UGC. We discovered that even though the three leading consoles can connect to the larger Internet, console connections are heavily constrained by digital-rights management technologies. These technologies also constrain the degree to which players can interact and share content with each other. Indeed, with respect to multiple PC games that we studied, such as Spore, Skyrim, and Minecraft, console-based versions of these same games afforded substantially fewer and substantially less robust UGC affordances. In the end, we only included three console-based populations in our survey, all of which were based on the Sony PS3 platform—and all of which we accessed, in part, through PC interfaces.

Finally, we should note that we did not select the populations studied because we believed they were likely to contain high levels of infringing content. However, we did avoid certain forms of UGC that seemed to be less interesting from the standpoint of copyright law. Essentially, if a UGC population seemed highly unlikely to produce content that raised interesting issues of copyright law, we tended to avoid it. For instance, both Halo 4 (an Xbox 360 multi-player game) and Star Trek Online (a PC-based multi-player game) have fairly sophisticated UGC tool sets that we examined. We found, however, that the tools provided were highly modular, consisting of pre-created elements that could be arranged by the user, but that could not be easily customized. With these sorts of modular authorial tool sets, there could still be a possibility of infringing content. However, that possibility seemed much less likely. While we did not categorically exclude those platforms from consideration, we generally focused our energies on platforms with more powerful tool sets that expanded authorial capabilities.

**Methodology 1: Sampling and Coding Populations**

We took 30 samples of UGC populations. In keeping with our flexible “scouting” methodology, we adopted a statistical approach designed to allow us to sample and code populations quickly. If we were attempting to determine the nature of our sample populations with greater statistical certainty, we could have used sample sets of 400 items or more. However, we concluded that it would be more in keeping with our “scouting” approach to sample a greater number of populations and accept a wider margin of error and lower level of confidence in our results. We therefore chose, as our norm, a sample size of roughly 100 items randomly chosen from our target populations. For a very large population, a sample size of 100 constructs a 95% confidence interval with a margin of error of roughly ±10%.

So, as an example of how this worked in practice, we sampled 102 of the 10 billion (or so) photographs on Photobucket. We coded 23% of the sample as raising potential copyright issues. The laws of probability tell us that (if our coding was correct and if there was no
sampling bias), we can be 95% confident that 13%-33% of the photographs on Photobucket raise potential copyright issues -- or, in other words, somewhere between 1.3 billion and 3.3 billion photographs on Photobucket raise potential copyright issues. It is worth noting that it would be impossible to conduct a careful fair use analysis for even a fraction of these photographs.

Choosing a smaller sample size allowed us to examine four times the number of UGC populations than we could have sampled using a more standard approach, a trade-off we felt was acceptable for a first pass at mapping out the basic terrain of contemporary UGC practices. Out of 30 samples, 25 contained roughly 100 items (97-102 items). There were five cases that deviated from this norm, as noted below.

As another general norm, we chose to sample the most recent UGC works uploaded on a platform. 18 of our 30 samples looked at the most recent items. There were two reasons for this. First, many UGC platforms did not provide accessible tools that enabled us to randomly sample from their entire populations, making it burdensome to establish the proper procedures for truly random sampling. However, most platforms did offer a means for obtaining access to the most recent UGC via a sorting algorithm. Second, we believed that to the extent that content moderators might have removed potentially infringing content—pursuant either to community complaints, platform owner policing, or third-party notices—this would be less likely to have occurred with respect to the most current content.

Additionally, to the extent that content was not later removed due to moderation, we saw no obvious reason why the most recent work on a given platform should deviate significantly from the historical practices on the same platform (further research might test whether this assumption is correct). Finally, it appeared that the standard two modes of sorting UGC content among platforms were “most recent” and some variant of “most popular”. It seemed likely that older UGC that failed to obtain popular status would effectively be buried from view, and thus of less relevance to current users of the platform. Other studies of social media generally confirm the rapid decay of popularity in most UGC over time (Cha, 2007; Mason, 2011).

Within our “most recent” samples, we never took simple seriatim samples of the most recent content. We were concerned adopting that approach might bias results by giving undue weight to particular creators who were heavily active during a brief time period. To avoid this, we used a systematic approach, sampling every 15th to 30th item (or so) in order of recentness. Given this, our results could be interpreted as either a systematic sample of small populations of recent works (without concerns about temporal bias) or as samples of the total populations that are potentially biased to the extent that the prevalence of referential practices have changed over time.

In a few cases as described below, another method of population sampling was used either for comparative purposes or for increased efficiency. With respect to four populations, we found that we were able to randomly sample the entire population (using either a systematic or true random approach to sampling as described below). With respect to one very small population (Civilization V maps on Steam Workshop) we were able to analyze the entire population. Finally, with respect to seven populations, we analyzed the “most popular” sorting algorithm of
the platform to identify smaller sub-populations of UGC prioritized in that way. In five of these cases, we were able to compare the “most popular” and “most recent” populations to see whether these two sorting procedures produced significantly different results. (As explained below, they did.)

Coding Methodology

Sampled populations were initially coded on the Google Docs platform to facilitate team collaboration, though Microsoft Excel and other software were used for a few populations. The gathered data was then imported into IBM’s SPSS statistical software for analysis.

Our primary goal was to determine whether items within the populations that we sampled raised issues of copyright law. When we concluded that a work in the sample set was at least partly based on a recognized, copyright-protected work, we coded that item as “referential.” When we concluded that the item was so similar that, if unauthorized and not a fair use, it would infringe the copyright in the original, we coded that work as “similar.” Finally, when we concluded that a work was clearly a satire, parody, or otherwise critical of the content that was copied and referenced, we coded the item as a “transformation.”

We should emphasize that although these determinations were legally informed, as discussed below, our tests were not fully congruent with applicable legal tests and we did not have access to all relevant facts. Therefore, none of our determinations in this study should be interpreted as legal opinions or advice. Within legal practice, professional standards would require a much more meticulous and thorough approach to assessing the actual copyright status of each of the (over 3,300) items we surveyed.

“Referential” = Apparently Based on a Copyright-Protected Work

From the outset of the project, we realized that to the extent we claimed that our results actually speak to the infringing or non-infringing status of UGC generally, they would be vulnerable to at least one very serious methodological criticism: they would be unavoidably under-inclusive.

The United States Copyright Act of 1976 (which became effective on January 1, 1978) vests authorial copyright upon the fixation in a tangible medium of any sufficiently creative work of authorship. A copyright need not be formally registered to be entitled to legal recognition. Despite common mythologies of copyright (Litman, 1991), there is no process that is required to secure a copyright today—it simply exists for all works that are created by authors.

So, given current law, it is essentially impossible to know conclusively that any particular work of UGC is original and not infringing. Even if one could memorize the contents of every item of authorial media retained by the Library of Congress, there would be trillions of publicly unknown amateur works, fully protected by copyright, that might be infringed by a person who finds and uploads a copy of such work without the permission of the original author. (There are notably many commentators who have advocated for the re-institution of a registration requirement in United States copyright law, most notably Sprigman (2004)).
To make this concern concrete, consider Figure A, an item from DeviantART included in our sample set, uploaded by the user “~theCHANGA” and entitled “Man Sketch.” No member of our research team recognized this work. Should this work therefore be deemed original and non-infringing? In this case (unlike with many other items sampled), we actually did have some additional information about the author that suggests originality. The DeviantART profile of ~theCHANGA indicated that she is a young woman living in Russia who creates traditional artworks, photography, and make-up art. (Russia is a party to the Berne Convention and a new work created in Russia should receive legal protection under United States copyright law.) This particular sketch seems to match the style of the other drawings in her online gallery. However, even though all of this information seems to indicate that this is an original artwork, it still might not be conclusive. According to some courts, even compositions that an artist believes are original may infringe a copyright. For instance, in one famous United States copyright case, George Harrison was found to have subconsciously copied the melody of the song “He’s So Fine” when writing his song “My Sweet Lord.” (Litman, 2006).

Despite the impossibility of certainty, we coded the item in Figure A as original.

As another example of problems with coding for referentiality, consider figure B, another item sampled from DeviantART. Is this work original? The first member of the research team concluded it was. However, a second member of the team recognized it as a cartoonish human version of the character “Twilight Sparkle” from the cartoon series “My Little Pony: Friendship is Magic,” a popular show with millions of viewers. Figure C is a more faithful version of the original character from the series (though it may also be a fan work). Upon closer examination, we realized that Figure B was intended by the UGC creator to imitate certain features of the character shown in Figure C. However, if no member of the research team had been familiar with the characters in “My Little Pony,” we would not have been able to identify Figure B as referential.

This demonstrates that even if a referenced work is highly popular and profitable, it can be difficult to spot referential practices if researchers are not familiar with the original work in question. Indeed, it could be argued (quite persuasively) that all authorial creativity is inherently referential, as many proponents of “remix” culture have claimed. However, given that existing copyright law and the UGC creators in many of the populations we studied do recognize a line between original works and “fan” works, we chose to accept this division and do our best to spot referential instances of creativity.
In order to maximize our odds of spotting referential works, we took a few approaches. We conducted searches for titles and other words used in item descriptions, we had three or more researchers review each item coded to spot potential references, and, in some cases, we employed online image search engines to locate images that were visually similar to the item being coded. It was quite common for UGC creators to note, in the titles and descriptions of their works, the work being referenced. (For instance, Figure B was entitled “Twilicorn,” and an image search on Google for that term leads to images resembling Figure C.) Still, we are relatively confident that there are certain works in our sample that we coded as non-referential that are, in fact, based on third-party works that were unknown to the members of the research team.

We coded works as “referential” when, as in Figure B, they either copied or claimed to copy some elements of known works, other than the platform itself, that our researchers recognized and believed to be protected by copyright law. The results of the project should be interpreted, therefore, as excluding all lesser-known and amateur works from the category of “referential,” and using the term “referential” only to denote references to widely-known works recognized by the research team.

While we did not systematically study this finding, it should be noted that, apparently, among the various UGC communities we surveyed, community concerns about copying were primarily about a sort of copying that we did not categorize as referential—i.e. copying of the UGC works posted on the platform by other users of the platform. UGC communities were often highly approving of UGC works that were based on popular books, movies, and television shows, but were highly critical of community members who copied and reposted the specific UGC works hosted on the platform. Some sites designed tools specifically to address these concerns. For example, The Skindex, a site for sharing Minecraft skins that we studied, had a notification mechanism so that users could report “stolen skins,” i.e. skins downloaded and reposted by another user. We did not code user copying of other UGC primarily because we could only spot that sort of copying infrequently—and when we did, it was difficult to tell which user was the original author and which was the copyist.

We should also note that we excluded UGC that made reference to the works on the platform itself and did not reference works external to the platform. Several game platforms we surveyed featured high levels of UGC related to the game’s own content—for instance, characters based on the characters featured in the game software. We coded this sort of UGC as “internally referential.” We reasoned that UGC based on the platform itself posed different copyright questions. Some of game-based UGC is created by assembling modular components and therefore is inevitably “referential” at the modular level. Also, we reasoned that platform creators generally do (or should logically) license players to create in-game content to be used with the game that is based on the game.
“Similar” = Raises Significant Copyright-Related Concerns

Next, if we noted that a particular UGC item was based on a known work, we then made a rough determination if the item was likely so similar that it would amount to a “misappropriation” of the original work under the standard of United States copyright law. This is a legal standard that requires a comparison of the original work with the potentially infringing work in order to determine if the copyist “took too much” of the original (Osterberg & Osterberg, 2012).

United States copyright law does permit the copying of any general “ideas” contained in an authorial work. An author, for instance, cannot obtain an exclusive right in the plot concept of an orphaned and unremarkable young boy who is revealed to be the son of remarkable parents and who inherits a powerful artifact that must be used to destroy a “dark lord” with magical powers. Nor can an exclusive right be claimed to that particular plot when it is set in a fantasy world of wizards and dragons or when it is set in a far flung galaxy populated with aliens and ice planets. However, copyright does protect an authorial work’s specific expression of ideas. The line between idea and expression, however, is notoriously elusive.

Determining whether an accused work is substantially similar to a copyright-protected original is a matter of law, not science. Courts and juries deciding the issue rely on past cases and their specific facts to determine whether the applicable standard has been met. Members of the research team were familiar with these cases and reviewed the applicable doctrine before coding the samples. Because we were wary that differences in opinion might exist based on personal understandings of the law, after the initial coding, one member of the research team (who had developed substantial expertise in the standard) re-reviewed all similarity determinations. Finally, the Principal Investigator reviewed all of these second level determinations, adopting a deferential standard of review (similar to that of an appellate court).

Given the vagueness of the legal standards at issue, is certainly possible that a court considering the actual works in question would reach a different determination. As an example of the difficulty of making this determination, consider Figure D, a “household” in The Sims 3 titled “Disney Princesses.” The title of the work indicates a clear intent to reference the works of Walt Disney, which is confirmed by the similarity between the members of the household and specific Disney characters. However, copyright law does not afford protection to dress designs, hair coloration, or the concept of mermaids—so individually, none of the characters would likely support a finding of substantial similarity. Collectively, however, as an ensemble of detailed characters with various specific appearances, we felt this “household” would likely be similar. (An informal poll of two intellectual property law professors supported this conclusion.)
Despite our use of a legal standard, our determination that a particular UGC item was “similar” to a known work should not be understood as a legal determination of prima facie infringement. Just as it is possible that works coded as “original” could, in fact, be copies of works of third parties, it is possible that some works coded as “similar” may not raise copyright issues for a variety of reasons. It is certainly possible that certain UGC could be posted pursuant to unknown licensing arrangements with copyright owners, that some defect might exist in the presumed copyright at issue, that some unknown equitable defense might be applicable to the UGC author, or that some relevant exculpating factual circumstance might arise in actual litigation. Additionally, it is possible that a given work, although substantially similar, might qualify as a permissible “fair use” under 17 U.S.C. §107. According to that section, any work that makes fair use of a copyrighted work is not an infringement.

In short, our coding of a particular work as “similar” should be interpreted only as a legally informed judgment that the particular work in question seems likely to raise a significant copyright issue, provided that other relevant facts support that finding and also provided that the work in question does not qualify as a fair use.

“Transformative” = Clearly a Critical or Parodic “Remix”

The following bears emphasis: Our definition of “transformative” used for coding does not correspond with the legal test for “transformative fair use.” There have been very few court opinions dealing with the phenomenon of non-commercial UGC fan works, and it is possible that all of the works described as “similar” could be protected as fair uses of the referenced works. However, it is hardly clear that this would be the case.

Several legal scholars, including Lessig (2008), have argued that certain forms of non-commercial and referential UGC should be uniformly characterized as fair use under the copyright statute. As Litman (2007) has explained, copyright doctrine has historically exempted non-commercial and personal uses of copyrighted works from infringement liability. Among UGC creators on many of the sites we surveyed, there was a common perception that “fan works” were not infringing. In comments to the USPTO, the Organization for Transformative Works (“OTW”) has made claims, supported by citations to applicable case law, that non-commercial “fan works” should be broadly defined as “fair use” under copyright law (Tushnet, 2013). Consistent with these arguments and theories, the Principal Investigator has advocated, on many occasions, for broader fair use rights with respect to non-commercial forms of UGC. It may be, therefore, that pursuant to recent judicial decisions, many or all of the UGC “fan” works surveyed constitute lawful fair use of any works that they reference.

Copyright’s fair use doctrine, as formalized by Congress at 17 U.S.C. §107, entails a consideration of four specific statutory factors, which have been interpreted by courts in a variety of ways. As Tushnet (2013) explains, under the Supreme Court’s Sony case, non-commercial UGC should benefit from a presumption of fair use, and it might be deemed “transformative” under existing doctrine in a variety of ways:

While many types of fair use, such as satire and parody, will comment on, relate to the historical context of, or critically refer back to the original works, this isn’t a
requirement. What is required is alteration of the original with new expression, meaning, or message.

Our interest with regard to “transformation” was not to define the outer boundaries of what Tushnet describes as the “alteration of the original with new expression, meaning, or message.” A capacious understanding of that test could, conceivably, lead us to the conclusion that all of UGC is transformative. A fan version of the Disney Princesses in The Sims 3 could, conceivably, be interpreted by the platform community as conveying a very different message, and serving a very different contextual purpose, than the original Disney princesses. A hand-drawn sketch of Twilight Sparkle posted to DeviantART might only benefit the copyright owners by promoting enthusiasm for the cartoon, and could also serve to hone the skills of the artist, express some creative ideas about the original, and communicate with the fan community.

In addition, even if the works in question are not lawful fair uses, it is well-recognized at this point by both UGC creators and by copyright holders that some forms of UGC are “tolerated uses.” Copyright holders, when confronted with fan works based on their original works, may explicitly license, informally encourage, or simply tolerate what they might plausibly believe to be infringements. As Tim Wu has written:

> [P]arts of various fan sites and fan fiction sites that can be easily found on the internet typify tolerated use. Take for example the fan site for the popular TV show Lost, broadcast by ABC, which is called the "Lostpedia." Among other things, the Lostpedia posts full transcripts of the program; such postings are almost certainly copyright infringement. But nothing is done, not because ABC is lazy, but because it doesn’t think suing the Lostpedia is a good idea. Such lack of enforcement against fan sites seems to represent copyright owners’ judgment that the infringing uses are complementary to the main copyrighted products—or put more simply, that fan sites will increase, not hurt, demand for the show (Wu, 2008).

We highlight the fact that much of the UGC surveyed may be fair use or tolerated use in order to clarify that our last coding variable is not a legal fair use determination. Our last factor considers whether the work in question is clearly “transformative” in the very narrow sense that it criticizes, parodies, or somehow significantly transforms the original work referenced.

We only coded as “transformative” those situations where we felt that the UGC in question was clearly intended to parody or criticize the original work and/or to “remix” it with additional content that transformed the work’s meaning. We were looking for content often held up by courts and commentators as exhibiting transformative parody or critical commentary, such as the 2 Live Crew “Ugly Woman” version of Roy Orbison’s “Pretty Woman,” which was determined to be a lawful and transformative fair use by the United States Supreme Court in *Campbell v. Acuff-Rose Music*, 510 U.S. 569 (1994). Mash-ups that combined two works in order to highlight their differences and similarities—such as the Grey Album or the remixes of Gregg (“Girl Talk”) Gillis—would also qualify as “transformative” under our coding test. Finally, works such as “slash fiction” (fan works featuring couplings of canonical characters) and other unconventional re-castings of original works (that would presumably not be licensed) could be characterized as transformative under our coding test.
Our goal in coding this variable was not to assess whether the works in question were lawful fair uses, but to determine how often the “remix” sorts of works that are popularly discussed with respect to UGC appear in actual UGC practices. These sorts of UGC are often highlighted in discussions as particularly valuable and worthy of legislative attention. Our goal was to assess their frequency within the sample populations.

As with the prior coding variables, there were some disagreements among the research team as to what constituted a parody, remix, or critical mash-up of disparate genres. When such disagreements occurred, we tended to code this variable against transformative status, only identifying as “transformative” those works where a consensus existed among the research team.

**Other IP Issues and Other Metadata**

While coding for copyright issues, we took a convenience-based approach to coding for other variables that were present in the data. Often, the sampled items contained information about the number of views and downloads they received. In sample sets where such information was made available, we generally recorded this data and tested to see whether referential status correlated with popularity. This practice ultimately became a substantial component of the project, potentially useful in testing common rhetorical claims that the most popular UGC is the most likely to be infringing.

We also coded the items for other variables that had legal implications. It was not difficult for graduate students trained in intellectual property law to notice and record the presence of several other legal issues that might be raised by particular UGC works. We coded our samples for trademark issues, right of issues, and indecency. This coding was understood as tangential to the principal project, but it was, like the copyright-related coding, double-checked by the research team.

**“Trademark Issues”**

United States law protects source-identifying marks used on goods or services as trademarks. Trademarks are protected against popular uses that confuse the public about the source of goods or services or that dilute the distinctiveness of famous marks. Many of the sampled UGC items contained logos, words, slogans, characters, and other material protected by the law of trademarks. For instance, the UGC “Disney Princesses” shown above in Figure D utilized the word “Disney” in the title of item, raising a potential trademark concern.

In the opinion of the Principal Investigator, if the UGC items sampled were not sold or used to designate the source of commercial goods or services, they should raise no significant trademark issues. However, many recent cases have featured trademark owners bringing infringement suits against video game developers, movie studios, and other creative industries in situations where recognizable brands appear in the context of creative works (Dougherty & Lastowka, 2008). Thus, the presence of recognizable trademarks in UGC could, at least in theory, raise legal issues for UGC creators and for intermediary platforms.
Our approach to coding for trademark issues was simple: when a member of the research team spotted a well-known cartoon or video game character, logo, or other trademark used in or in relation to UGC, we coded that item as raising a trademark law issue. It is certainly possible, as with the copyright issues, that many trademarks were not recognized to the extent that our research team was unfamiliar with certain marks.

“Right of Publicity Issues”

In the United States, celebrities generally have, under both the Lanham Act and state rights of publicity, the ability to enjoin the economic exploitation of representations of their identity—subject to the limits of the First Amendment. Publicity rights are quite complicated, doctrinally, but the general rule at present seems to be that recognizable celebrities have a right to prohibit the sale of non-transformative, non-journalistic works that derive a significant portion of their value from the recognizable celebrity. Notably, these laws have been applied to video games and companies have been held liable for featuring celebrity avatars in video games without legal authorization to do so. In the opinion of the Principal Investigator and other commentators, some of these decisions are doctrinally erroneous, but they are nonetheless controlling law (Lastowka, 2012c, Ford & Liebler, 2012; Gutman, 2012).

Our approach to coding for publicity issues was essentially the same as our approach to trademarks. When a member of the research team spotted a recognizable celebrity in UGC, we coded the item as raising a right of publicity issue. Some interesting questions came up with respect to micro-celebrities (e.g. college assistant basketball coaches, well-known YouTubers)—generally, we coded these micro-celebrities as celebrities if we felt their potential endorsements carried some level of value. We almost certainly missed the presence of certain micro-celebrities in the sample sets, however, due to the research team’s lack of micro-celebrity expertise.

“Indecency Issues”

One of the most common worries among platform owners about UGC is the risk that some user will create inappropriate content. While content can be “inappropriate” without raising legal issues, we decided to code the content for “indecency.” Indecent speech is speech that can be regulated by the states because it may be harmful to minor children. The FCC currently defines indecent speech as: “language or material that, in context, depicts or describes, in terms patently offensive as measured by contemporary community standards for the broadcast medium, sexual or excretory organs or activities.” (A contemporary example of “indecency” was Janet Jackson’s 2004 “wardrobe malfunction” during the Superbowl halftime show.)

Given that the existing legal standard is hardly a model of clarity, we adopted a simplified version of the test for coding. Images and animations displaying bare breasts, human genitals or sexual intercourse were coded as indecent. Explicit verbal descriptions of sexual intercourse (such as are found in Lady Chatterly’s Lover) were also coded as indecent. In short, our general approach was that if a particular piece of UGC would probably not be permitted within an elementary school library, it would be coded as indecent. (We should note that we do not endorse this legal standard, we simply applied it for coding purposes.)
As it turned out, indecent content was exceedingly rare among the majority of the populations we studied. It was not clear if this lack of indecent content was due to aggressive and early moderation practices by site owners or whether it was simply due to a lack of this sort of UGC being produced in any substantial quantities by the communities in question. It may well be that some platforms owners are concerned that even one item of indecent content among thousands—or content deemed “inappropriate” for non-legal reasons—will have serious adverse consequences for the platform in terms of public relations.

A Note on Fan Fiction

Finally, with respect to the two populations of fan fiction in our study, we concluded that the copyright implications of these two populations were not amenable to our standard approach. By its very nature, fan fiction is a referential practice that borrows substantially from the referenced work. The only interesting copyright variable was, therefore, transformation, and it seemed that the substantial majority of the fan fiction works we reviewed were not clearly parodies or satires of Harry Potter.

Of course, an argument might be made that all fan fiction is transformative, given that every story presents new situations and new interpretations of a world and its characters—it was not uncommon for fan fiction authors to slightly shift the original story, re-imagining certain aspects of the story in new ways. However, a counter-argument might be made that even fan fiction where Harry Potter was recast as “evil” simply represents an amateur author’s extension of the existing story and is not so different than what might appear in a standard sequel. In the end, we could not find a consensus view on how to code for “transformation” within the fan fiction sample sets. So rather than coding these two samples for copyright issues, we decided to code for more empirically verifiable variables that might shed some light on the nature of fan fiction production practices. For detailed discussions of the complex fair use issues surrounding fan fiction, see Tushnet (1997, 2013).

Methodology 2: Industry and Player Surveys

Numerous surveys have been conducted to date concerning the extent of UGC practices, including the use of YouTube, blogging, Facebook, and other forms of social media. However, there have been fairly few statistical surveys of UGC in the context of video games, one of the forms most central to our study. To augment our understanding of UGC practices in video games, we conducted online surveys of two populations using Qualtrics survey software. The data was then imported into IBM’s SPSS (statistical software) for analysis.

Our first survey was directed to all players of video games. The research team promoted the survey through university press releases, postings on video game forums, the project website, and social media. Participants were not compensated for answering the survey questions. We ultimately collected 411 complete survey responses. Most questions sought to establish a descriptive picture of the extent of UGC practices among players, their motivations for UGC creativity, and their opinions about the value of UGC.
Our second survey was directed at video game developers. We promoted the survey via the game developer website Gamasutra and through personal industry contacts of the team members and others interested in our research. Participants were not compensated for answering the survey questions. We ultimately collected 46 complete survey responses. Most questions sought to establish a descriptive picture of respondent opinions about the value of UGC and their understandings of player motivations and practices. We also solicited several narrative responses, which were then grouped and coded based on patterns that emerged from the responses.

We saw our surveys as a useful way to supplement the insights gained by our coding of the characteristics of the platforms. The surveys gave us some useful clues as to the demographics of particular platforms and the motivations of participants engaged in particular sorts of practices. Both surveys provided useful confirmations of the relevance of some of our findings and helped us to understand the significance of some of the data in the platform-coding portion of the project.

The following two sections present our initial summary data on both the platform coding and survey portions of the project.
## Overview of Sample Sets

### Populations Overview

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<td>DeviantART</td>
<td>2-D artwork</td>
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2 The population numbers for DeviantART, Spore, The Sims 3, and ModNation Racers are all based on platform claims about the total amount of UGC uploaded on the platform. The specific categories listed and analyzed are smaller sub-populations of these numbers.
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## Statistical Overview Sorted by Approximate Population Size

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3 Again, we note that the population numbers for DeviantART, Spore, The Sims 3, and ModNation Racers are all based on platform claims about the amount of UGC available. The specific categories listed and analyzed are smaller sub-populations of these numbers.
## Sample Sets Grouped by Selected Genres

### Artwork Populations

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<th>Tran.</th>
<th>Int. Ref.</th>
<th>TM</th>
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<td>4%</td>
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<tr>
<td>Recent</td>
<td>2-D art</td>
<td>19%</td>
<td>10%</td>
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### Avatar Populations

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<td>70%</td>
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<td>34%</td>
<td>2%</td>
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<tr>
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<td>22%</td>
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<td>9%</td>
<td>27%</td>
<td>2%</td>
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<tr>
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<td>19%</td>
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<td>14%</td>
<td>4%</td>
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</tr>
<tr>
<td>Sims Households (Top 100)</td>
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<td>1%</td>
<td>10%</td>
<td>20%</td>
<td>7%</td>
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<tr>
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### Maps Populations

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### Object Populations

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<tr>
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<td>2-D art</td>
<td>42%</td>
<td>33%</td>
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<td>--</td>
<td>10%</td>
<td>10%</td>
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</tr>
<tr>
<td>Minecraft Avatars (Skinindex)</td>
<td>Random</td>
<td>Avatars</td>
<td>22%</td>
<td>6%</td>
<td>1%</td>
<td>10%</td>
<td>20%</td>
<td>7%</td>
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</tr>
<tr>
<td>Sims Households (Top 100)</td>
<td>Popular</td>
<td>Avatars</td>
<td>24%</td>
<td>13%</td>
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<td>22%</td>
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</tr>
<tr>
<td>Second Life Artwork</td>
<td>Random</td>
<td>2-D art</td>
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<td>40%</td>
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<td>5%</td>
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</tr>
<tr>
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<td>Recent</td>
<td>Avatars</td>
<td>9%</td>
<td>2%</td>
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<td>5%</td>
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<tr>
<td>ModNation Avatars (Recent)</td>
<td>Recent</td>
<td>Avatars</td>
<td>33%</td>
<td>19%</td>
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<td>14%</td>
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</tr>
<tr>
<td>Sketch Club</td>
<td>Recent</td>
<td>2-D art</td>
<td>19%</td>
<td>10%</td>
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<td>--</td>
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</tr>
<tr>
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<td>Avatars</td>
<td>21%</td>
<td>18%</td>
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<td>--</td>
<td>16%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Minecraft Avatars (PMC)</td>
<td>Recent</td>
<td>Avatars</td>
<td>35%</td>
<td>22%</td>
<td>--</td>
<td>9%</td>
<td>27%</td>
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</tr>
<tr>
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<td>Avatars</td>
<td>86%</td>
<td>70%</td>
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<td>23%</td>
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<td>--</td>
<td>19%</td>
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### Internally Referential Populations

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<tr>
<th>Description</th>
<th>Sample Method</th>
<th>Content Type</th>
<th>Ref.</th>
<th>Sim.</th>
<th>Tran.</th>
<th>Int. Ref.</th>
<th>TM</th>
<th>Pub.</th>
<th>Ind.</th>
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<tbody>
<tr>
<td>Spore Avatars (Most Popular)</td>
<td>Popular</td>
<td>Avatars</td>
<td>10%</td>
<td>5%</td>
<td>--</td>
<td>44%</td>
<td>10%</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Skyrim Mods</td>
<td>Recent</td>
<td>Mixed</td>
<td>3%</td>
<td>--</td>
<td>--</td>
<td>19%</td>
<td>3%</td>
<td>--</td>
<td>--</td>
</tr>
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<td>17%</td>
<td>13%</td>
<td>1%</td>
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</tr>
<tr>
<td>Garry’s Mod Mods</td>
<td>Recent</td>
<td>Mixed</td>
<td>14%</td>
<td>8%</td>
<td>--</td>
<td>16%</td>
<td>7%</td>
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</tr>
<tr>
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<td>Random</td>
<td>Avatars</td>
<td>22%</td>
<td>6%</td>
<td>1%</td>
<td>10%</td>
<td>20%</td>
<td>7%</td>
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</tr>
<tr>
<td>Minecraft Avatars (PMC)</td>
<td>Recent</td>
<td>Avatars</td>
<td>35%</td>
<td>22%</td>
<td>--</td>
<td>9%</td>
<td>27%</td>
<td>2%</td>
<td>--</td>
</tr>
<tr>
<td>Spore Vehicles (Most Popular)</td>
<td>Popular</td>
<td>Objects</td>
<td>7%</td>
<td>6%</td>
<td>--</td>
<td>6%</td>
<td>14%</td>
<td>--</td>
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</tr>
<tr>
<td>Sims Households (Recent)</td>
<td>Recent</td>
<td>Avatars</td>
<td>9%</td>
<td>4%</td>
<td>--</td>
<td>3%</td>
<td>9%</td>
<td>1%</td>
<td>--</td>
</tr>
<tr>
<td>Sims Households (Top 100)</td>
<td>Popular</td>
<td>Avatars</td>
<td>24%</td>
<td>13%</td>
<td>--</td>
<td>1%</td>
<td>22%</td>
<td>6%</td>
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</tbody>
</table>

### Paired Recent/Popular Sample Sets

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<tr>
<th>Description</th>
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<th>Ref.</th>
<th>Sim.</th>
<th>Tran.</th>
<th>Int. Ref.</th>
<th>TM</th>
<th>Pub.</th>
<th>Ind.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spore Avatars (Recent)</td>
<td>Recent</td>
<td>Avatars</td>
<td>4%</td>
<td>1%</td>
<td>--</td>
<td>--</td>
<td>5%</td>
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</tr>
<tr>
<td><strong>Spore Avatars (Most Popular)</strong></td>
<td>Popular</td>
<td>Avatars</td>
<td>10%</td>
<td>5%</td>
<td>--</td>
<td>44%</td>
<td>10%</td>
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</tr>
<tr>
<td>Sims Households (Recent)</td>
<td>Recent</td>
<td>Avatars</td>
<td>9%</td>
<td>4%</td>
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<td>3%</td>
<td>9%</td>
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</tr>
<tr>
<td><strong>Sims Households (Top 100)</strong></td>
<td>Popular</td>
<td>Avatars</td>
<td>24%</td>
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<td>1%</td>
<td>22%</td>
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</tr>
<tr>
<td>ModNation Avatars (Recent)</td>
<td>Recent</td>
<td>Avatars</td>
<td>33%</td>
<td>19%</td>
<td>--</td>
<td>--</td>
<td>14%</td>
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</tr>
<tr>
<td><strong>ModNation Avatars (Popular)</strong></td>
<td>Popular</td>
<td>Avatars</td>
<td>86%</td>
<td>70%</td>
<td>--</td>
<td>34%</td>
<td>2%</td>
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</tr>
<tr>
<td>SL Mixed Content (Recent)</td>
<td>Recent</td>
<td>Mixed</td>
<td>8%</td>
<td>7%</td>
<td>--</td>
<td>--</td>
<td>7%</td>
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</tr>
<tr>
<td><strong>SL Mixed Cnt (Best Selling)</strong></td>
<td>Popular</td>
<td>Mixed</td>
<td>9%</td>
<td>7%</td>
<td>--</td>
<td>6%</td>
<td>3%</td>
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</tr>
<tr>
<td>Spore Vehicles (Recent)</td>
<td>Recent</td>
<td>Objects</td>
<td>4%</td>
<td>1%</td>
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<td>--</td>
<td>1%</td>
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</tr>
<tr>
<td><strong>Spore Vehicles (Most Popular)</strong></td>
<td>Popular</td>
<td>Objects</td>
<td>7%</td>
<td>6%</td>
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Discussions of Specific Sample Sets

1. DeviantART

DeviantART is an artwork-sharing platform hosted in California. The site originated as a platform for sharing software modifications, but its primary use today is for sharing visual artwork. The site also includes sections for sharing software modifications (“mods”), poetry, craft art, and other creativity. DeviantART does not provide tools for creating new works, so users employ a variety of software and traditional tools and then upload files to the site. The site offers a rich range of social software affordances. Users can create personal galleries and even claim their own subdomains on the platform (e.g. yourname.deviantart.com).

As of 2011, DeviantART’s owners claimed that over 250 million images had been uploaded to the website. The owners also claimed that over 2 million unique individuals visited the site daily; that over 14 million users contributed to the platform; and that there were over 150,000 daily uploads of new material. Perkel (2011) offers an excellent and in-depth portrait of DeviantART, including an ethnographic account of its community dynamics and the ways in which DeviantART supports or refutes various claims about UGC made in academic writing (e.g. Lessig (2008), Benkler (2006), Shirky (2008), and Jenkins (2006)).
Site Rules

Usage of DeviantART is governed by a terms of service agreement that explicitly prohibits uploading infringing content. A plain language discussion of copyright issues is currently included on the site in a document entitled “Copyright Policy.” This document indicates that users should upload only original works and warns them that their fair use rights are narrow. The site lists a DMCA agent and explains the site’s takedown procedures. It notes that uploaded works will be deleted from the site in response to complaints by copyright holders. In 2013, DeviantART streamlined its DMCA process by creating an on-site form for copyright holders to request the removal of art that they allege is infringing.

The site’s terms, however, do very little to explain how copyright law applies to new user works that reference well-known popular works. As noted by Perkel (2011, pp.190-191), the legality of fan works is not clear to DeviantART users, and many seem anxious about intellectual property issues. Forum discussions on the site sometimes feature questions about copyright law’s application to user creativity. For instance, one message posted to the forums asks:

I always thought you could make.. let’s say a Pokemon plushie and you could own that but never sell it due to copyright. Or make a Hello Kitty plushie, Sonic plushie, etc. But I see TONS of people selling all kinds of things on Etsy and other sites that I figured wouldn’t be allowed but it is.. or is it?

To which another user replies:

Well, you can make something SIMILAR to let’s say Pikachu, call it an electric mouse plushie, and most likely be within the law. If you make a Pikachu, and call it a Pikachu, you are indeed committing a crime by American copyright law. However, most of the Japanese companies, and those that license them in the USA will not go after you. So people are breaking the law, but unlikely to get into any legal trouble for it.

Several other discussions suggest that users who clearly label their work as “fan art” are protected against infringement liability. It is not clear how many users read these forum posts, but clearly the messages on DeviantART about copyright law are varied and do not generally reflect a clear knowledge of copyright law and fair use doctrine.

Sampling Method

A member of the research team obtained a systematic sample of 99 of the most recent 2,000 works uploaded to DeviantART during a weekday afternoon in 2013. This population constituted less than an hour’s worth of the most recent works uploaded to the site on the day the initial item was sampled.
Sample Characteristics

Within the sample set of 99 items, 94 unique authors were identified, making it likely that more than 500 users contributed to the total population of 2,000 works. Slightly less than half of the items sampled (42%) were seen as “traditional” drawings (meaning sketches or painterly images). Slightly more than a quarter (28%) constituted photographic images or digital photographic collages. There was a strong showing within the sample set of Japanese-style anime/manga cartoons, with 18% coded as referencing cartoon characters or adopting a cartoon-like style. The sample set also included some more diverse items, such as textual works, screenshots of web pages, craft works, and other items.

Copyright Implications

The research team found that 42% of the works sampled were referential to known copyright-protected works. 33% of the items sampled were deemed similar to the work in question. Only 2% of the works were deemed clear transformations of the referenced work.

Photographic works were less likely to be coded as referential than traditional artworks. While only a quarter of the photographs were recognized as referential to known works, roughly half of the non-photographic works were recognized as referential.

Popularity and Referential Works

Among other metadata it gathers, DeviantART tracks the number of times a particular work has been viewed. Utilizing the Mann-Whitney U, we found no significant correlation between the number of times a particular work was viewed and whether the work was referential to a recognized work (p=.788). The comparative distributions are shown graphically in Figure 1.

The mean number of views for works in the sample set was 33 and the median was 10, reflecting a positive skew and a “power law” distribution of popularity. (With respect to Internet UGC, it is common that a few works receive a majority of views while the majority receive only a few views, and this was generally true of the populations we surveyed.) Particular outliers with high view counts (over 200) appeared to be more detailed “professional” works. These works included a photograph of a model in a swimsuit, a “special effects” image of three realistic
dinosaurs in an interior setting, and two anime portraits that the research team considered to be particularly skillful in their execution.

DeviantART allows users to indicate that works are “favorites.” As was the case with views, we observed no statistically significant correlation between the number of “favorites” a work received and whether that work was coded as referential to a recognized work. The mean “favorites” of the sampled items was 4 and the median was 1, indicating a positive skew.

Not surprisingly, we observed a statistically significant correlation between DeviantART’s various metadata popularity metrics. Works viewed more often were, presumably, more likely to be marked as favorites.

Other IP issues

10% of the sampled works contained recognized trademarks, constituting characters, logos, or trademark-protected words and phrases. 10% of the works contained images of celebrities. These were generally publicity photographs of celebrities that were either copied or “remixed” by the authors. No works in the sample set raised concerns about indecency. However, it should be noted that explicit images are hosted on DeviantART and can be accessed by registered users. The site also has a filter that can be adjusted to allow or prohibit viewing “mature content.”

Notes

The DeviantART sample revealed a diverse set of creative practices, with a fairly high level of referential fan art practices among the community. Cartoon and anime works were very popular, and uploaded works often took the form of fan versions of the popular cartoon and anime characters in them. Still, the majority of artwork on the site was not recognized as referential to known works, suggesting that the majority of the active community engaged in creative practices that should not trigger concerns of copyright infringement.

2. Sketch Club

As a comparison sample for DeviantART, we also sampled works from Sketch Club. Sketch Club is a digital painting application with sharing tools first released in 2010. During the summer of 2013, it was available in the iTunes store for three dollars. Sketch Club was apparently created and is maintained by a solo software developer who actively participates in the community.
Sketch Club is available for Apple iOS on the iPhone, iPad, and iPod. There is an associated website where Sketch Club users can “like” and comment on uploaded digital drawings. The app’s creator claims that over 250,000 sketches have been uploaded to the website. This is certainly a significant number of creative works, but this figure indicates that the corpus of UGC available on Sketch Club roughly one thousand times smaller than what is available on DeviantART.

No ethnography exists of Sketch Club similar to that of Perkel (2011) concerning DeviantART. Although both sites are platforms dedicated primarily to sharing visual artwork, the technological affordances of the two platforms are substantially varied. SketchClub is primarily an image creation application for mobile devices. The sharing platform seems like a secondary feature of the creative application.

One unique feature of the Sketch Club sharing platform is the ability for users to observe metadata about the creation process of an image. For instance, the “Harry Otter” sketch shown in Figure 2 was created (according to the website) with 12,949 specific brushstrokes. The site shows a miniature animation of the creation process, something not normally accessible to viewers of traditional artworks. This sort of history could be potentially instructive to those interested in improving their own skills. DeviantART, by contrast, only shows finalized content.

Sketch Club forums indicate that some users are concerned about copyright law and the way it might limit what they can create and share. As with the DeviantART community, few users who participate in these discussions have a good grasp of the rules of copyright law. The following post, for instance, confuses copyright infringement with plagiarism—something that non-lawyers are often prone to do:

```
Honestly, I think the bottom line is if you copied a photo or character, just give credit to the original artist. It’s not that hard.
Ex.
This character was created by Pixar.
The original photo was taken by (name).
```

We found it interesting, however, that some other users of Sketch Club add the word “copyright” to the titles of their sketches.

**Site Rules**

Perhaps reflecting Sketch Club’s more modest numbers and slimmer administrative apparatus, no explicit rules could be found on the Sketch Club application or the associated website addressing intellectual property issues. Sketches can currently be “reported” by members of the site via a mechanism in the application and website. Reporting a sketch brings up an option to indicate a sketch raises a “copyright issue” or contains “inappropriate content,” indicating that

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**Figure 2: #2.61 (Harry Otter)**
there is at least some awareness of intellectual property issues raised by the UGC. However, there is no clear guidance as to how these reports are processed by the site’s administrators.

Sampling Method

A member of the research team obtained a systematic sample of 97 of the most recent 2,000 works uploaded to Sketch Club during a weekday afternoon in 2013. Based on the metadata accompanying the items, the sampled population constituted approximately three days of community uploads to the Sketch Club website.

Sample Characteristics

Within the sample set of 97 works, 83 unique authors were identified, making it likely that over 200 users contributed to the sampled population during the days in question. Many of the drawings (43%) included were figurative, with about a quarter being portraits of humans or humanoid figures. About a third of the drawings were undeveloped single images, featuring a foreground object with a white or single-color background. As with DeviantART, a cartooning style dominated the sketches, with over half of the drawings (53%) being identified as cartoonish.

Copyright Implications

The community of Sketch Club artists was substantially less likely to engage in referential practices than the DeviantART community. Overall, only 19% of the sampled works were identified as being referential to copyright-protected works. Only 10% of the sample (ten works) was deemed similar to the copyright-protected work that was referenced. The majority of these works were either sketches of recognized characters (Pokemon characters were again popular) or drawings closely based on photographs.

None of these were deemed to clearly constitute transformations of the original work. The sketch in Figure 2 (titled “Harry Otter”) was unusually skillful as well as unusually challenging from the standpoint of transformation. Ultimately, the researcher deemed the sketch to be non-transformative, given that the drawing is referential to Rowling’s Harry Potter and offers little
that criticizes or parodies the character (other than presenting him in the form of an otter). Other members of the research team, however, believed there was a stronger claim for transformation. Given the diverging views, we felt the case was not clear-cut and the item was coded as non-transformative.

**Popularity and Referential Works**

Sketch Club tracks the number of times a particular work has been viewed. Utilizing the Mann-Whitney U, we found no significant correlation between the number of times a particular work was viewed and whether the work was referential to a recognized work (p=.656). The comparative distributions are shown in Figure 3. The mean number of views was 41 and the median was 24, indicating a positive skew in the distribution. Outliers with higher views were generally more developed and skillful works. The “Harry Otter” sketch shown in Figure 2 was the most viewed of all the sampled items, with 344 views.

Sketch Club also allows users to “like” works. As was the case with views, we observed no significant correlation between the number of “likes” a work received and whether that work was referential to a recognized work. The mean “likes” rating of the sampled items was 15 and the median was nine.

Again, not surprisingly, we observed a statistically significant correlation between metadata measuring popularity. The number of “likes” a work received and the number of times the work was viewed was significantly correlated. Presumably, works viewed more often were more likely to receive attention and therefore to receive “likes.”

**Other IP issues**

The decrease in referential practice on Sketch Club was mirrored by a decrease in the prevalence of other IP issues. About 7% of the sampled sketches contained recognized trademarks, with several sketches that were referential to Pokemon characters. The “Harry Otter” sketch was

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4 Unless otherwise noted, claims made in this Report about statistical significance or the absence of statistical significance are based on our use of the non-parametric two-tailed Mann-Whitney U test (p≤0.05). We will reference this test simply as the “Mann-Whitney U” from this point onward.
flagged as raising potential trademark concerns. 3% of the sketches contained images of celebrities, such as Taylor Swift and Kristen Stewart. No sketches in the sample raised concerns about indecency.

Notes on DeviantART and Sketch Club

The characteristics of the Sketch Club sample make an interesting comparison with DeviantART. The Sketch Club community uploads significantly fewer referential works, suggesting, perhaps, that it is less of a “fan” community and more supportive of wholly original forms of creativity.

3. Flickr

Flickr is a photo-sharing website first released in 2004 and now owned by Yahoo! In 2012, Flickr claimed that over 8 billion photographs had been uploaded to its site. As one of the first digital photo-sharing sites to achieve broad popularity, Flickr is mentioned in many discussions of UGC practices. Lessig (2008), Zittrain (2008), and Shirky (2008) all discuss Flickr as a representative UGC platform. However, in recent years, Flickr’s primacy has faded somewhat in light of competing photo-sharing platforms like Photobucket and Instagram, as well as the rise of photo sharing through other forms of social media, such as Facebook and Twitter.

Like DeviantART and SketchClub, Flickr offers users a range of social affordances for sharing and viewing content. Users can compile and share collections of “favorite” photographs
(including other users’ photographs), create multiple galleries of works, comment on posted photos, “follow” other users, contribute to collective photography projects, etc.

Site Rules

Usage of Flickr is governed by a terms of service agreement that prohibits uploading infringing content. A plain language discussion of copyright issues is also included currently on a document entitled “Flickr Community Guidelines.” According to Lessig (2008), the community of Flickr polices content on the site in various ways:

Community members do more than simply use the space that is provided for them. In a metaphorical sense, they pick up the trash. One of the keys to Flickr’s success was the fact that its members constantly policed the site against porn. Members can flag a photo as inappropriate. Pornography is quickly moved off the site. The same with reviews. As [Flickr founder Stewart] Butterfield told me, “People aren’t writing reviews just because they happen to like writing reviews.” They do it instead because they feel part of a community (Lessig, 2008, 193).

Flickr lists a DMCA agent and describes the site’s notice and takedown procedure. Many news reports detail instances where Flickr has removed photographs in response to DMCA notices. For instance, one controversy erupted in 2009, when Flickr responded to a DMCA takedown notice by removing a photograph of President Obama wearing white face paint. Partially in response to that incident, which triggered complaints of censorship by some commentators, Flickr changed its policy so that the site would retain and display certain metadata from photographs taken down in response to DMCA notices. (The thought was that when content was removed, the metadata could persist as a public record of the takedown – similar to the website www.Chillingeffects.org.)

Flickr offers users licensing tools (Creative Commons licenses) that they can use to permit the lawful reproduction and other use of their photographs according to certain criteria. As of 2013, the site offered over 250 million photographs licensed in this way, or approximately 3% of Flickr’s total catalog. At least one recorded opinion describes a lawsuit by a Flickr user against a party that used the user’s photograph beyond the permissions of the Creative Commons license. Chang v. Virgin Mobile U.S.A, 2009 U.S. Dist. LEXIS 3051 (N.D. Tex. Jan. 16, 2009).

There are also a smaller number of public domain photographs hosted by Flickr (“The Commons). These photographs are made available by a partnership between Flickr and various public institutions. Apparently, according to a forthcoming paper by Erik Hekmann, only about 200,000 such photos are made available on Flickr, a fairly small percentage of Flickr’s total corpus of photographs.
Sampling Method

A member of the research team obtained a systematic sample of 97 of the most recent 2000 photos uploaded to Flickr during a weekday afternoon in 2013. This amounted to roughly 2 minutes worth of photographs uploaded to the site during that day.

Sample Characteristics

Within the sample set of 97 photos, 81 unique authors were identified, making it probable that over 200 users contributed to the sampled population of 2000 photographs. This may seem like a fairly small number of users to be contributing to the site, given the size of Flickr’s total user base. However, it is likely attributable to both the small (two minute) time span of the sample and the common practice of “batch uploading” large sets of pictures in a group. Many of the photos included metadata suggesting that they had been taken at earlier dates. It seems likely that users of Flickr may store many digital pictures in their cameras and then upload them to the site later. Within the sample population of 97 items, no single user uploaded more than 3 photographs, suggesting that the batch uploading during the time period was concurrent.

The subject matter of the pictures reflected the diversity of popular uses of photography. A quarter (25%) appeared to be individuals posing for the camera. A quarter (24%) of the photos were action shots. Photographs of nature (14%) and vehicles (9%) were both common. The majority of pictures (65%) were taken outdoors. One fifth of the pictures (20%) were taken with a mobile phone.

Copyright Implications

Overall, 13% of the works were identified as referential to copyright-protected works, with a subset of 5% of the sample being deemed similar to the copyright-protected work. The number of referential works counted in the sample set may be misleadingly high, however, given that a large number of the works coded as referential were photographs of architecture. Because architectural designs are now protected by United States copyright law (see 17 U.S.C. §102(a)(8)), the coding researcher concluded that these architectural photographs raised potential copyright issues. However, the architectural works were not coded as similar, largely
because 17 U.S.C. §120 carves out an exception to copyright for photographs of architectural works that are visible from public spaces.

Five photographs were deemed to be potentially infringing, however. All these photographs presented rather close copyright law questions. Two were photographs of public murals (e.g. Figure 4), one displayed a street sculpture, one was a photograph of a handwritten letter, and one was a picture of an artist (presumably a friend of the photographer) working at creating a piece of calligraphy. While none of these photographs were coded as transforming the original works, they did seem like largely incidental and unintentional copies, with the photographer being interested primarily in something other than the copyright-protected work potentially infringed. So while all of these photographic uses might be classified as protected fair uses, none were deemed to be transformations of the original work.

### Popularity and Referential Works

Flickr tracks the number of times a particular work has been viewed. We found no significant correlation between the number of times a particular work was viewed and whether the photograph included a copyright-protected work.

The mean number of views for photographs sampled was four and the median was one. There was one extreme outlier photograph with 200 views. This was a handwritten letter from a seller who had apparently breached a contract with a purchaser. Interestingly, this image also raised potential copyright issues, given that the person posting the letter was presumably not the author. However, a strong fair use case might have be made for the letter's reproduction. All other significant outliers had fewer than 30 views, and were generally pictures of babies (presumably viewed by the photographer’s friends).

### Other IP issues

About 13% of the sampled works contained recognized trademarks. These were generally incidental instances of copyright reproduction as well, where logos were being used on merchandise or clothing. One photograph displayed a minor celebrity (an NBA basketball coach). No works in the sample set raised concerns about indecency.

### Notes

It was curious how few Flickr photographs posed significant copyright issues, and how many photographs seemed to be primarily of interest to the photographer. Bruns (2008) distinguishes...
the “produsage” of UGC from what he terms “life caching,” a term which denotes content created primarily to be shared with friends and relatives. While our broader investigation of the Flickr platform did reveal a range of active communities engaged in artistic photography sharing and criticism, our sample suggested to us that the majority of Flickr users are not engaged in digital photography and UGC sharing primarily for aesthetic reasons.

4. Photobucket

Photobucket is one of many sites today that offers services similar to Flickr. Photobucket is a photo and video-sharing site that launched in 2004. The owners claim that the site is slightly larger than Flickr, with over 10 billion images hosted and 4 million new uploads each day.

Many users reportedly rely on Photobucket as an aid to listing items for auction on sites such as eBay and Craigslist. Photobucket encourages this sort of usage. However, Photobucket, like Flickr, also provides an array of social networking tools, allowing users to identify friends, follow their photos, form communities, tell “stories” in connection with photographs, and comment on the photos of other users.

Site Rules

Usage of Photobucket is governed by a terms of service agreement that prohibits uploading infringing content. On a page entitled “Photobucket Corporation Copyright and Intellectual Property Policy,” the site provides information about its DMCA takedown procedures. At least one reported opinion notes how Photobucket actively employs the notice and takedown procedures in response to copyright owner complaints. See Wolk v. Kodak Imaging Network, Inc., 2011 WL 940056 (S.D.N.Y. March 17, 2011).

As shown in Figure 5, Photobucket users can currently flag content for various reasons: nudity, copyright infringement, promotion of racism, or general policy violations.

Sampling Method

A member of the research team obtained a systematic sample of 102 of the most recent 2,000 works uploaded to Photobucket during a weekday afternoon in 2013. As with the Flickr sample, this represented only a few minutes of user uploads.
Sample Characteristics

Within the sample set, 89 unique authors were identified, making it probable that over 200 users contributed to the sampled population. As with the Flickr set, the small size of the creator population is probably attributable to multiple batch uploads over a short time frame.

The subject matter of the pictures was similar to the Flickr sample set: diverse images that did not seem to be primarily aesthetic photography. As with the Flickr set, a quarter (24%) of the sample set appeared to be individuals posing for the camera, presumably snapshots taken of friends and family. Somewhat fewer photos than the Flickr set (40%) were taken outdoors. This prominence of indoor photographs may reflect the common use of Photobucket for online auctions, and that may also explain the substantial number of photographs (31%) depicting single inanimate objects, such as comic books or automobiles. Approximately a third of the pictures (31%) were uploaded from a mobile phone.

Copyright Implications

Overall, 29% of the works were identified as referential to copyright-protected works, with a subset of 23% of the sample being deemed similar to the copyright-protected work. About half of these were instances of marginal copying, such as those found in the Flickr set. A given photograph, for instance, might include a copyrighted logo on a t-shirt or might include a plastic toy that is subject to copyright protection.

However, our sample included several more direct copies of artistic images. These included photographs of books, DVDs, and sports merchandise. We presumed that these were pictures of items for sale and might be protected as a fair use of the works in order to facilitate the lawful resale of the items. However, we concluded that none of the photographs were transformations of the original work.

Popularity and Referential Works

Photobucket tracks the number of times a particular work has been viewed. As was the case with Flickr, we found no significant correlation between the number of times a particular work was viewed and whether the work was referential to a recognized work. The number of views
within the set was, again, very low. The mean number of views was 1.45 and the median was 0 views. Outliers with somewhat higher views (maximum of 14) could not be categorized simply. They included a Christmas photograph, a photograph of a comic book cover, and a photograph of a small hand-drawn sketch.

Other IP Issues

About 19% of the sampled photographs contained recognized trademarks, often noted in photographs presumed to accompany auction sales. 2% contained images of celebrities. None of the sampled photographs raised concerns about indecency.

Notes on Flickr and Photobucket

It was remarkable to the research team how few of the photographs on Flickr and Photobucket seemed like works of artistic photography, especially given that both sites emphasize visually interesting UGC on their home pages. It was also remarkable that most copyright issues raised by the UGC were not raised by “piracy” of commercially valuable images, but instead by the accidental or instrumental (in the case of auction sales) inclusions of copyright-protected visual matter.

5. Thingiverse
Thingiverse is a website for sharing templates (“things”) to be used to print objects on 3-D printers. Thingiverse was launched in 2008 and is owned by MakerBot, a company that manufactures 3-D printers. In June 2013, Makerbot claimed that over 100,000 works had been uploaded to the site.

There is currently a great deal of interest in UGC and 3-D printing as a potentially disruptive technology that may impact the manufacturing industry in much the same way that UGC practices have now transformed the media industry. While a few legal articles have been published examining the technology and its intellectual property implications (see, e.g., Finocchario (2013), Rejeski (2013), Weinberg (2010)), the technology is still not in broad popular usage.

Like all the sites previously described, Thingiverse incorporates various social software affordances, allowing users to, e.g., comment on new things, “like” particular designs, follow particular creators, and create custom collections of designs. Figure 6 shows an example of a work included in our sample set: an original 3-D printed toy object.

**Site Rules**

Thingiverse has detailed terms of use, including a plain language translation of those terms. The terms forbid uploading content that infringes on intellectual property rights. The site also utilizes the DMCA notice and takedown procedures. Various news reports indicate that the site has taken down specific things in response to infringement notices. The Thingiverse site, like most UGC sites, demands a license to use uploaded UGC in a limited fashion. For Thingiverse, the licensed is “solely for the purposes of including your User Content in the Site and Services.”

At the time of sampling, there was no simple way, via the standard user interface, to “report” specific things as problematic. There was also no general forum on the Thingiverse site, so discussions of copyright issues tended to occur primarily in the context of particular designs. Such discussions do occur. For instance, one template was described by the author as being scanned from a store-bought model. Apparently, this thing was “featured” on the Thingiverse home page. This prompted a vigorous debate over whether the thing constituted copyright infringement. Some site members argued that the thing was a fair use, but another countered with the following:

> Just like how we cant use a custom recording device, capture audio from a song, upload it here, and re-appropriate its rights, we cant scan someones for-sale products and re-appropriate those rights to others. We cant rely on yelling Fair Use
for everything we do. We may be Open Source loving makers, but we still have to follow some basic rules.

While it is not relevant to copyright, there is also speculation as to how Thingiverse UGC may pose new threats to patent rights (including design patents). Thingiverse reportedly removed gun templates from its site in 2012 and several journalistic reports have discussed the legality of distributing 3-D printable templates for guns and gun parts.

Sampling Method

A member of the research team obtained a systematic sample of 100 of the most recent 1500 works uploaded to Thingiverse during a weekday afternoon in 2013.

Sample Characteristics

Within the sample set of 100 works, 95 unique authors were identified, suggesting that over 500 users contributed to the sampled population. About twenty of the works were sculptural forms, and these tended to raise the most significant copyright questions. Nine of the works were cellphone cases. Nine items were related to tabletop games (a surprisingly high number). Ten were jewelry (bracelets, rings, or earrings). About thirty could be characterized as components for particular machines or tools.

Copyright Implications

Overall, 25% of the works were identified as referential to copyright-protected works, with a subset of 8% of the sample (eight works) being deemed similar to the copyright-protected works. The majority of the referential but not similar works were jewelry, game pieces, and simple logos. The eight similar works were generally faithful “fan” copies of recognized works (e.g. a Pokemon character and Google’s Android robot). None of the referential works were deemed to be transformative.

Popularity and Referential Works
Thingiverse tracks the number of times a particular work has been downloaded. The mean number of downloads was 213 and the median was 179. An extreme outlier was a plan for a metal casting furnace which garnered 2753 downloads.

The chart in Figure 7 shows the distribution of downloads in the Thingiverse sample set. The graph displays a relatively heavy tail compared to a standard power law distribution. Utilizing the Mann-Whitney U, we found no significant correlation between the number of times a particular work was downloaded and whether the work was referential to a recognized work (p=.146).

There potential utility of 3-D printed objects might have influenced our results. It could be, for instance, that most Thingiverse users are presently just as interested in printing objects with practical utility (e.g. cell phone covers and machine components) as they are in making plastic copies of popular cartoon characters.

Other IP Issues

6% of the sampled works contained recognized trademarks. None of the things in the sample set contained images of celebrities or raised concerns about indecency.

Notes

Thingiverse UGC clearly does raise copyright questions, but at this point, most potential infringements seem to take the form of small fan works (e.g. toys) printed in plastic. While there seem to be many works of this sort on the site, we also found many examples of original small sculptural objects, such as the dinosaur-like sculpture shown in Figure 6. The caption to the picture in Figure 7 explains that the sculpture was created based on a drawing by the author’s daughter. Arguably, this could mean the sculpture is a derivative work, but we coded the sculpture as non-referential on the presumption that some sort of licensing arrangement was in place.
Second Life is an avatar-based virtual world created by Linden Lab. It was first launched in 2003. Second Life describes itself as an environment “imagined and created” by its users. Very little content on the platform was created by the Linden Lab development team. Instead, Linden Lab created various tools and technological affordances on the platform that users have employed to generate the virtual world. Users of Second Life—or at least a subset of them with the appropriate skills—design their own avatars, build their own virtual objects and structures, and create “scripts” that make virtual objects interactive.

As the Principal Investigator has explained in prior work (Lastowka, 2010), Second Life features a virtual economy that intersects with the real economy. Users of Second Life can sell copies of their creations for Linden dollars, a proprietary virtual currency maintained by Linden Lab that can be bought and sold for standard currencies (e.g. U.S. dollars). The Second Life Marketplace is the official platform hosting user-created virtual objects offered for sale in Second Life. The Second Life Marketplace claims over 2 million items are offered for sale on the platform.

Like Flickr, Second Life has been one of the paradigmatic examples of the social potentials of UGC. Most books about UGC include discussions of Second Life, including, e.g., Bruns (2008), Benkler (2006), and Lessig (2008). Ethnographies situated in or around Second Life include Malaby (2009) and Boellstorff (2008). The Principal Investigator has also discussed the legal questions surrounding the prevalence of UGC in Second Life (Lastowka, 2008, 2010). The original founders of Second Life were well aware of issues of copyright law and UGC. They consciously set out to create an innovative business model that harnessed UGC and rewarded player-creators (Ondrejka, 2004).
Some commentators, such as Benkler (2006) and Bruns (2008), define UGC exclusively as non-commercial creativity, so it is important to note that our survey of Second Life UGC focused only on items for sale in the Second Life Marketplace. It is true that free content and items can be found on the Second Life platform outside the Marketplace. Our sample set may be criticized for not reflecting the extent of non-commercial creativity on the Second Life platform.

If UGC is defined as inherently non-commercial, it may follow that Second Life Marketplace content is not truly UGC. However, Second Life content, including content that is sold on the Marketplace, is often described as UGC by academic commentators. The Marketplace also does provide the most easily accessible system for obtaining Second Life content. Finally, Linden Lab promotes the Marketplace as a way for new users to obtain avatars and other objects, making it a central feature of the platform.

**Site Rules**

Second Life utilizes DMCA notice and takedown procedures, although their use in Second Life plays out somewhat differently than their use on many other UGC platforms. Second Life’s terms of service indicate that users own copyright in the content that they submit to the site. In itself, this is not so unusual, as many UGC sites only require a license to uploaded works. However the business model of Linden Lab has been premised on the belief that users will exploit their retained copyright interests by selling copies of original content to other users of Second Life in exchange for Linden dollars.

In other words, Second Life pursues a business model that relies on users making real profits from sales of UGC on its own platform. Consequently, the DMCA, in Second Life, is the mechanism that the platform creators hold out to profit-oriented users as a means of demanding removal of infringing content sold by other Second Life users. Third parties are also, of course, free to use the procedures and demand the removal of Second Life content.


For understandable reasons, the Second Life community is often very interested in copyright law. Discussions of copyright law and its impact on user creativity in Second Life are very common. Indeed, the Principal Investigator has spoken with Second Life audiences about copyright issues on several occasions, as have other legal scholars, such as Lawrence Lessig and Richard Posner. Second Life even hosts a virtual “Second Life Bar Association,” where members (including practicing lawyers) discuss copyright law matters with other Second Life users on a regular basis.
We sampled a total of four populations of creative material from the Second Life Marketplace: avatars, artwork, and two samples of mixed Marketplace content.

**Avatars**


Second Life users can craft their own avatars using the tools in the software, or they can obtain or purchase avatars created by other users. The Second Life Marketplace allows users to purchase various customized avatars for Linden dollars.

**Sampling Method**

A member of the research team obtained a systematic sample of 100 of the “complete avatars” offered on the Second Life Marketplace during a weekday afternoon in 2013. The sampled population of 19,600 avatars represented essentially all complete avatars being offered on the Marketplace at that time.

We should note a potential shortcoming in our methodology: we did not choose to purchase and try out all the avatars sampled in the set to determine if the actual virtual products, once purchased, matched the depictions in their advertisements. Instead, we relied primarily on the screenshots of the avatars and their written descriptions to ascertain the copyright status of the avatars being offered. Since most copyright issues raised by avatars are also raised by screenshots of avatars, we did not consider this a fatal flaw to the methodology, though we could certainly have missed certain references not revealed by the advertising.

**Sample Characteristics**

Within the sample set, 89 unique authors were identified. Virtual ethnographies often discuss the intersection of gender and avatars, so we took note of this characteristic within the sample, to the extent we felt gender was signaled by the advertisement. Of the 100 avatars for sale, 18 seemed to be male, 42 seemed to be female, 15 were sales that included both male and female avatars, and 25 avatars were viewed as either ambiguous or non-gendered (e.g., robots). Twenty avatars were anthropomorphic animals. This may be evidence of a strong culture of “furry fandom” on Second Life.
Copyright Implications

Overall, we found that 21% of the avatars were identified as referential to recognized copyright-protected works, with a subset of 18% of the sample (ten works) being deemed similar to the copyright-protected work. Avatars deemed to be similar generally referenced popular cartoon and videogame characters (e.g. Looney Tunes, Transformers, and Dragon Ball Z).

Other IP Issues

16% of the avatar advertisements displayed recognized trademarks. 2% (two) avatars were based on celebrities (Sylvester Stallone and Kim Kardashian).

With respect to indecent content, Second Life contractually prohibits those under age 18 from using its service and is known to cater to “mature” audiences. As one example of this, the Second Life Marketplace lists a separate content category for “BDSM” avatar accessories. Many avatars in the sample set seemed sexually suggestive—for instance, 28% of the advertised avatars were either nude, partially nude, or wearing some form of lingerie (e.g. a thong). 3% of the avatars were nude and therefore deemed to raise potential concerns about indecency.

Popularity and Referential Works

The Second Life Marketplace did not provide easily accessible metrics to gauge the popularity of the sampled works (i.e. the number of times a particular work had been purchased). However, the Second Life Marketplace does list sale prices. The histogram in Figure 8 shows the prices in Linden dollars for the various avatars in the sample set, grouped into referential and non-referential sets.

One avatar was offered for free, but the majority of avatars were being offered for the equivalent of less than 2 U.S. dollars (converted from Linden dollars). The median $L$ price was $L300, the mean was $L599. The maximum price was $L6999 (roughly $25) for a particularly detailed female “fantasy” avatar sporting wings and a tail.

Figure 8: Avatar Price in $L
We found no statistically significant correlation between the referential nature of avatars and their prices. The similar distributions are shown graphically in Figure 8. We also observed no significant correlation between “mature” avatars and price.

The mean price of female avatars ($L717) was somewhat higher than the mean price of male avatars ($L496). Utilizing the Mann-Whitney U, we found no statistically significant correlation between the referential nature of avatars and their prices (p=.226). However, it is worth noting that Castronova (2004), using a larger sample set (N=611) with respect to male and female avatars in the game Everquest, did observe a statistically significant correlation between avatar gender and price. Interestingly, however, in Castronova’s sample set, female avatars sold for less than male avatars. Our sample suggests that some correlation may exist in Second Life, but if it does, it would appear to point in the opposite direction.

7. Second Life Artwork

As discussed in Boellstorf (2008), Malaby (2009), Lastowka (2010), Second Life users often create virtual “homes” for their avatars, and decorate those homes with artwork and virtual objects. The Second Life Marketplace allows users to purchase UGC artwork that might be used in their virtual homes.

Sampling Method

A member of the research team obtained a systematic sample of 100 items from the “artwork” category of the Second Life Marketplace during a weekday afternoon in 2013. The sampled population of 48,000 artworks represented essentially all artworks available in the Marketplace at that time.

Sample Characteristics

Within the sample set, 91 unique authors were identified, suggesting that over 300 creators contributed to the total population. Of the artworks sampled, the human figure seemed popular: approximately a third (31%) were representation of human (or humanoid) figures, with 10% being traditional (head and shoulders) portraits. Slightly less than a third of the artworks (27%) were sculptural works and a third (33%) were deemed to be “abstract” or non-representationual artworks.
Copyright Implications

Overall, 51% of the works were identified as referential to copyright-protected works, with a subset of 40% of the sample set being deemed similar to the copyright-protected work. The majority of these artworks were exact copies of works of visual art that could be found on the Internet. A large number of the artworks deemed referential were not recognized immediately by the researcher, but were discovered only after the use of specialized image search engines. One artwork, which borrowed substantially from a smartphone application’s logo, was deemed to constitute a transformation of the original work.

Other IP Issues

Five of the artworks displayed recognized trademarks (Winnie-the-Pooh, Harley Davidson). Four displayed celebrities (e.g. Kate Middleton, Joan Crawford). A handful of artworks contained nude or thinly attired figures, but the nude artworks in the sample set did not display genitals and seemed within the normal cultural boundaries of figurative art practices. Accordingly, none of the artworks were deemed indecent by the research team.

Popularity and Referential Works

Because Second Life Marketplace did not provide easily accessible metrics to gauge the popularity of the sampled works, we were unable to determine whether the popularity of particular artworks correlated with their referential or non-referential status. However, Second Life Marketplace did list sale prices for artworks, which presumably would (roughly, via market mechanisms) reflect artwork popularity with purchasers. The histogram in Figure 9 shows the prices in Linden dollars for the various artworks in the sample set.

As the histogram in Figure 9 suggests, there was no statistically significant relationship between the referential nature of works and their price, though the mean price for non-referential works was actually slightly higher than the mean for referential works.

The majority of Second Life Marketplace artworks were offered for less than $L375 (one dollar).
Utilizing the Mann-Whitney U, none of the descriptive categories mentioned above (e.g., portraiture, sculpture) was observed to have a meaningful correlation with the price of artworks. Curiously, the variable of “abstract” art approached statistical significance ($p=.055$), with abstract works having a mean price of $1.390 as opposed to $1.152 for non-abstract artworks.

8. Second Life Mixed Content (Recent)

The Second Life Marketplace claims to host **over 2 million items** for sale in addition to avatars and artworks (e.g., virtual real estate, virtual animals, virtual weapons, avatar clothing, and services). To compare this wide range of content, we analyzed two samples from the Second Life Marketplace. Another sample analyzed all items identified by Linden Lab as “best selling.” The precise definition of “best selling” was not immediately apparent, but these are presumably items that Linden Lab deems commercially popular.

For our first “mixed content” sample, we analyzed the most recently uploaded items for sale. A member of the research team obtained a systematic sample of 98 items from “all categories” on the Second Life Marketplace during a weekday afternoon in 2013. The sampled population of 48,000 items represented the most recently uploaded 2% of the total items available on the Second Life Marketplace.

**Sample Characteristics**

Within this “recent” sample set, 94 unique authors were identified, making it probable that over 600 users contributed to the most recent 48,000 items. Of the items sampled, about a quarter (27%) were avatars or components of avatars (e.g., hair or tattoos), about a quarter (23%) were buildings or landscaping/furniture for buildings, and a little less than half (41%) were avatar clothing. Avatar clothing is obviously a popular category of content offered on the Second Life Marketplace.
Copyright Implications

Overall, 8% of the works were identified as referential to copyright-protected works, with a subset of 7% of the sample being deemed similar to the copyright-protected work. While some of these were similar to “fan works” found on other UGC sites (e.g. a Club America soccer shirt and a Hello Kitty object), some were less obvious copies of less well-known works, including one apparent copy of a shirt design that was featured on DeviantART. None of the similar works were deemed to amount to transformations of the original.

Other IP Issues

7% of the items displayed recognized trademarks. None of the items for sale created publicity or indecency concerns, though the researchers coding the items noted that many of the depictions of avatars modeling and advertising the items were sexualized depictions.

9. Second Life Mixed Content (Best Selling)

For our second “mixed content” sample, a member of the research team obtained a systematic sample of 100 items from the top 48,000 “best selling” items on the Second Life Marketplace during a weekday afternoon in 2013. This should have represented the most commonly purchased 2% of the total items available on the site. Within the sample set, 93 unique authors were identified, making it probable that over 400 users contributed to the total population.

Within the sample, slightly less than half (41%) of the items were avatars or components of avatars (e.g. hair or tattoos). This number was a notably higher percentage than was found in the sample of recently uploaded items (27%). 15% of the items were buildings or landscaping/furniture for buildings, and about a third of the items (36%) were avatar clothing.

Copyright Implications

The copyright implications of the “best selling” items were almost identical to the findings with regard to the recently sampled items. Overall, 9% of the works were identified as being
referential to copyright-protected works, with a subset of 7% of the sample being deemed similar to the copyright-protected work. The majority of references spotted were copyright-protected images incorporated into avatars or clothing (e.g. references to Star Wars, My Little Pony, or South Park). None of the similar works were deemed transformative.

Other IP Issues

Six of the items displayed recognized trademarks. None of the items created publicity concerns. As with the recent sample, the listed items themselves were not thought to raise indecency concerns. However, three of the listed items were modeled in advertisements by nude female avatars, raising potential concerns about indecency with respect to the advertising.

Notes on Second Life Samples

Given the prominence of Second Life as a UGC platform, we found it very interesting that referential activity seemed to exist in varying degrees according to various UGC genres. We were surprised by the high prevalence of referential artworks on the Second Life Marketplace, but were also surprised by the fairly low incidence of referential practices in the sample of recently uploaded content. It was also notable that while referential items existed in the Linden Lab “best selling” category, the incidence of referential practice did not seem to vary significantly between the recent items and the “best selling items.”
10. Spore Avatars (Recent)

Spore is a video game primarily played on the PC platform. It was designed by Will Wright and Maxis studios, makers of “The Sims,” another game commonly discussed with regard to UGC practices (and discussed further below). Spore was published by Electronic Arts in 2008. Its UGC potentials were featured prominently in its advertising and promotion (Chaplin, 2005).

Spore is a single-player game that requires the player to evolve from a microscopic organism to a space-faring civilization. The game was marketed (at least originally) as a useful way to introduce children to the basic concepts of biological evolution. However, Spore is primarily a video game, or more accurately, a sequence of consecutive video games where players must amass resources and perform tasks in order to “evolve” to the next stage of game play. While Spore is a single player game, it is possible to encounter UGC created by other players during the course of play (i.e., avatars, vehicles, and buildings).

Spore’s editing tools are flexible and simple enough for children to use. However, Spore’s Creature Creator does constrain user creativity to some extent. Users may only build creatures by utilizing pre-existing parts and textures, some of which are locked and must be purchased by scoring points in the game. Maxis/EA also markets “expansion packs” such as “Creepy and Cute” that allow players to pay for software containing new creature parts and coloring patterns. With the purchase of additional software, users can create custom adventure maps. Generally, the avatar and object authorship tools in Spore are significantly more constrained than the authorship tools in many other games discussed below.

Spore claims that over 180 million user creations have been uploaded to Sporepedia, the game’s website for sharing UGC.
Site Rules

Spore’s UGC exchange site, Sporepedia, forbids uploading user-generated content that infringes intellectual property rights. The site lists an address for an agent to receive DMCA takedown notices. On the forums, some users have posted about receiving notice that their content has been removed by EA, while others have complained about other users making copies of their UGC. Several forum discussions directly address the application of third party copyrights to UGC featured on Sporepedia. For instance, on one forum thread, in response to a player question about whether creatures might infringe copyright, another player responded:

It is not copyright infringement. There’s not a company that would dare sue or throw out cease and desist orders on the stuff you make in Spore that looks like copyrighted materials unless you actually used portions of copyrighted materials. It’s more along the lines of fan art or parody work, which is perfectly acceptable and normally legal. There are some instances where it’s illegal, but nobody wants a PR disaster that attacking fans would bring about, so as long as you don’t use copyrighted material (ie: steal meshes or textures from another product or try to sell your creation) you’re good to go.

Spore players typically use a three-dimensional editing program created by Maxis to design their own avatars (“creatures”). Spore creatures are often very alien and non-humanoid. Figure 10 displays a typical example from the sample set.

Spore players may post their creatures to the Sporepedia website, where other users may download and use the creature (for free) as their own avatar species as an in-game opponent creature. Notably, some of the features of Spore avatars are not entirely cosmetic. For instance, the tail of the creature in Figure 10 can be used as a weapon at one stage in the game, and creatures that have wings can fly short distances, enabling them to escape from opponents in dangerous situations. However, other artistic features, such as coloration and patterning, are primarily cosmetic. Spore creatures evolve throughout the game, growing new limbs and obtaining clothing at the “tribal” stage of their evolution. In later stages, creatures live in buildings and travel in vehicles, both of which are also forms of UGC in the game.

To analyze the copyright implications of Spore creatures, we took two sets of samples, one based on the most recently uploaded creatures and one based on the creatures designated by Maxis/EA as the most popular.

A member of the research team obtained a systematic sample of 100 of the most recent 2000 creatures on Sporepedia during a weekday afternoon in 2013. All creatures in the sample set were created on the same day.
Sample Characteristics

Within the sample set, 91 unique creators were identified, suggesting that over 300 users contributed to the most recent 2000 creatures on this particular day.

Copyright Implications

The vast majority of Spore creatures were not recognized as referential to any existing copyright-protected characters. Only 4% of the creatures were identified as referential to copyright-protected works (e.g. Nintendo’s Yoshi, Rainbow Dash from My Little Pony). Only 1% of UGC (one work) was found to be similar to the referenced copyright-protected work and therefore to raise significant copyright questions. That work was not considered transformative.

Other IP Issues

5% of the avatars were deemed to raise trademark issues by referencing identifiable cartoon and video game characters potentially subject to trademark protection. (These essentially overlapped with the creatures that were referential to copyright-protected works.) As none of the creatures appeared even vaguely human, none raised concerns about indecency or resembled celebrities.

11. Spore Avatars (Most Popular)

Sporepedia did not provide metrics on the popularity of particular creatures, but it did allow sorting by popularity. It was not clear what “popularity” meant in this context, but whatever it meant, it was a way that EA/Maxis prioritized UGC for those seeking to find the best items.

We used this built-in sorting function to test whether more “popular” creatures were more referential. A member of the research team obtained a systematic sample of 100 of the most recent 1000 creatures on Sporepedia during a weekday afternoon in 2013. As discussed below, there did seem to be an increased number of referential works among the most popular Spore creatures, though we found that the most popular creature referenced was actually one created by EA/Maxis.
Copyright Implications

Overall, 54% of the most popular Sporepedia avatars were identified as referential to copyrighted works. However, 44 of the 54 referential works were referential to characters from within the Spore universe, with the majority being UGC variants of the “Grox,” an initially mysterious and belligerent frog-like alien race with a distinctive asymmetrical and cyborg-like facial appearance. (Within the game’s internal files, the Grox are named “The Grob,” which, spelled backwards, is “Borg,” a famous cyborg nemesis from the Star Trek universe.)

The Grox are the player’s primary antagonist in the game and their asymmetrical creature design is difficult to replicate using Spore’s Creature Creator—most users trying to recreate the Grox must use software modifications. Thus, making Grox UGC is both a display of expertise and a user creation with special significance to the community. We coded references to the Grox and other Spore-based creatures as “internally referential” and excluded them from further analysis.

Excluding these creatures, the number of referential works dropped to 10%, with only 5% of the total sample set being similar to the (non-Spore) referenced work. This number is still slightly higher than the set of recent Spore creations, suggesting that despite the prevalence of the “Grox effect,” more popular works on the platform were still more likely to be externally referential.

All five similar works were referential to other popular video game characters. One was a “peashooter” from the PopCap game Plants vs. Zombies (see Figure 11) and two were fairly detailed variations on Nintendo’s Yoshi, a cartoonish and round dinosaur creature particularly amenable to Spore’s creation tools.

Other IP Issues

41% of the most popular Spore avatars were found to raise potential trademark concerns, but the majority of these were references to in-game creations like the Grox, with a small number being references to third-party trademarks, such as Nintendo’s Yoshi. Excluding in-game references, only 5% of the creatures raised potential trademark issues (e.g. Yoshi and the
Peashooter). As with the set of recent creatures, there were no concerns about indecency or publicity rights because almost none of the creatures resembled a human being.

12. Spore Vehicles (Recent)

In addition to designing creatures, Spore players can edit and share custom vehicle designs on the Sporepedia website. Vehicle designs are primarily cosmetic—they have even less effect on actual game play than creature design. Since vehicle appearance has little effect on functionality, it was not uncommon for users to create non-vehicle designs for vehicles (e.g. toilets, humanoid figures, and unicorns). Over five percent of our sample sets were these sorts of “vehicles.”

As with the Spore creatures, we took two sets of samples. The first set was of recently uploaded vehicles and the second set was sampled from the most “popular” vehicles.

For the most recent set, a member of the research team obtained a systematic sample of 100 of the most recent 2,000 creatures on Sporepedia during a weekday afternoon in 2013. As with the creatures, all the vehicles surveyed were uploaded during a single day.

Sample Characteristics

![Sample Vehicles](image)

Within the sample set, 95 unique creators were identified, suggesting that over 500 users contributed to the most recent 2,000 creatures.

Copyright Implications

![Copyright Implications](image)

Overall, 4% (four) of the recent Spore vehicles were identified as referential to copyright-protected works, though two of these were referential to works within Spore. Only one vehicle was deemed similar to a recognized copyright-protected work. This was unicorn which was an confessed attempt by the creator to create a new “My Little Pony” character. Though the user copied the general style of a winged unicorn from the cartoon series, this was a close case and it is certainly possible that a court would deem the “vehicle” lacking in similarity.
Other IP Issues

Only the winged unicorn raised third party trademark concerns. No other vehicles raised concerns about indecency, or resembled celebrities.

13. Spore Vehicles (Popular)

We also took a sample of the most popular vehicles on the platform. A member of the research team obtained a systematic sample of 101 of the most popular 2,000 vehicles on Sporepedia during a weekday afternoon in 2013.

Sample Characteristics

Within the sample set, 89 unique creators were identified, suggesting that over 200 users contributed to the most popular 2,000 creatures.

Copyright Implications

Referential practices were not common, but they were more frequent among the most popular vehicles. Overall, 13% of the works were identified as referential to copyright-protected works. However, excluding Grox references, only 7% of the works were referential to extrinsic works, with 6% being deemed similar to those works. These included two vehicles based on Doctor Who and two works based on Nintendo’s Super Mario games and Mario Kart.

Other IP Issues

14% vehicles were deemed to raise trademark issues (not related to the trademarks of EA/Maxis). Curiously, most of these were not references to cartoon or video game characters. 11% of the trademark references were references to specific historical vehicles, including a large
number of World War II era land vehicles and planes. (Some of these trademarks are presumably abandoned at this point, but we coded them as potential trademark issues nonetheless.)

These World War II vehicles were created by five different authors, suggesting the existence of an active community of Spore players interested in replicating historical vehicles within the Spore game. As an example, see Figure 12, which presents a player’s version of the Messerschmitt BF-109 E, a German fighter plane. The comments to the right of the image are from other users praising the creator on the historical accuracy of the plane model.

Notably, there is nothing about Spore that lends itself particularly to World War II themes. The presence of an apparent corpus of highly popular World War II vehicles suggests that this particular community has somehow latched onto Spore and Sporepedia as tools for creating and sharing UGC related to their area of historical interest. Controlling for the Grox and these historical vehicles, only three vehicles raised non-Spore and non-WW II era trademark concerns.

14. Spore Buildings (Recent)

In addition to avatars and vehicles, Spore players can edit and share custom building designs on the Sporepedia website. Building designs are purely cosmetic. They have no effect on game play. Therefore it is not surprising that, as with the vehicles sample sets, a significant number (5%) of buildings were not really buildings, but representations of other objects (e.g. a sink, a grenade, a crocodile).

Sampling Method

A member of the research team obtained a systematic sample of 100 of the most recent 2,000 works uploaded to Sporepedia during a weekday afternoon in 2013.

Sample Characteristics

Within the sample set, 95 unique authors were identified, suggesting that over 500 users were uploading new buildings during the sample’s time period.
Copyright Implications

Though the research team did not have extensive experience in spotting architectural works, it seemed there were very few copyright issues raised by Spore buildings. Only one building in the sample set was deemed to be referential to a copyrighted work: a city block including an alien tripod from the H.G. Wells novel, The War of the Worlds. That novel is now in the public domain and the tripod was not deemed to be similar to the tripod design from the recent Tom Cruise film, so it was determined that the item was not similar to a protected work.

Other IP Issues

None of the vehicles raised concerns about indecency or resembled celebrities. After some discussion, it was determined that the tripod in the “War of the Worlds” item could, at least arguably, raise some trademark concerns.

15. Spore Adventures

Finally, our sixth sample set from Spore consisted of “adventures” created by users of the Spore “Adventure Creator” tool that accompanies the Spore “Galactic Adventures” expansion set. The Adventure Creator tool allows players to design planets complete with landscapes and objects, script interactive plots with friendly and unfriendly creatures, add special effects and sounds, and create game goals for players. It is a much more complex creation system that produces a much more complex UGC work.

Sampling Method

A member of the research team obtained a systematic sample of 100 of the “most popular” 2000 adventures on Sporepedia during a weekday afternoon in 2013. It isn’t clear what criteria was used to isolate the “most popular” adventures. The URL of the query contained the words “view-topRated” as the delimiting search string. However, the adventures in the sample set had been created at very different times and had wildly divergent view counts.

Sample Characteristics

Within the sample set, 96 unique creators were identified, suggesting over 600 users contributed to the 2,000 “most popular” adventures.
Copyright Implications

Overall, within the sampled Spore Adventures, 34% of the works were identified as referential. However, as with the other Spore user creations, a large portion of these works (19%) referenced content native to the Spore game. Excluding Spore’s own copyrights, only 17% of the adventures were deemed referential to non-Spore works, with 13% deemed similar. These including adventures incorporating characters and objects from Doctor Who, My Little Pony, various Nintendo games, and Star Trek.

Several adventures were indeed “remixes” and “mash-ups,” blending, e.g., Star Wars with Doctor Who content, Toy Story with SpongeBob, and Darth Vader with Nintendo’s Fox McCloud. While only one of these works was deemed to be a transformation, arguments based on remix and mash-up transformation seemed more plausible with respect to the Spore Adventures than they had for any previous sample sets.

For instance, one particular adventure replaced the crew of Star Trek’s Enterprise with anthropomorphic cat-like creatures. Though the plot of the adventure was humorous, the researcher evaluating this adventure did not consider it a parody of Star Trek, or critical of Star Trek, or find that it suggested something interesting about the mash-up of cats and Star Trek. Instead, the adventure seemed like an unauthorized tribute to Star Trek involving cat-people (much like the “Harry Otter” picture on Sketch Club). Of course, opinions might differ and it is certainly possible that some court would find the adventure to meet the standard of parody.

Other IP Issues

13% of the Spore adventures included recognized trademarks. None of the adventures raised indecency or publicity concerns.

Notes on the Spore Sample Sets

Our six samples from the Spore game provided some interesting insights into game-based UGC. As with Second Life UGC, it was clear that particular categories/genres of UGC trended toward or away from referential forms of creativity. The largely negligible presence of “fan” activity in the category of Spore buildings, for instance, could be explained in various ways—perhaps the tools are not adequate to easily reference well-known buildings, perhaps Spore players aren’t interested in architectural works, or perhaps they assume few members of the community would appreciate those references.
The relatively low level of player referential practices in Spore creatures vis-à-vis DeviantART could also have various explanations: perhaps the technological limitations of the Creature Creator limits its appeal to fans of cartooning and anime as a creative technology. The presence of a community of World War II enthusiasts on Spore, however, suggests that it can be appealing to certain communities—especially given that the creators of the game appeared to do little or nothing to encourage the formation of that community.

The apparent difference between “recent” and “popular” samples of both creatures and vehicles suggests that referential practices, at least in Spore, do seem to correlate with increased “popularity,” although the high popularity of Grox UGC suggests that fans of a particular game may be most inclined to create and download fan works related to the game that they are playing.

Finally, the referential activity in Spore Adventures suggests—not surprisingly—that more complex forms of media creativity lead to more possibilities for referential (and potentially infringing) activity. Additionally, complex forms of creativity seem to be more likely to incorporate a diversity of references. Creators of Spore Adventures seem more inclined to “mash up” a number of references in creating their scenarios.

16. The Sims 3 Avatars

The Sims 3 is the third incarnation of the famous life simulation game The Sims, one of the most popular computer games of all time. Like Spore, The Sims 3 was developed initially by Will Wright and Maxis and is published by Electronic Arts. The Sims 3, like the other games in the series, is primarily a “sandbox” game, allowing players to create simulated persons, set their
appearance and personality traits, find them a house and a job, and then manage their social and family life. The lifetime of an average (default settings) Sim person is about three months. The Sims 3 was first released in 2009. EA claims that over 150 million copies the series (and associated expansion packs) had been sold circa Spring 2013.

Using in-game tools, players can create a range of content in The Sims 3, such as clothing, houses, pets, tattoos, and neighborhoods. These creations can be uploaded to “The Exchange,” the official community site hosting user-generated content. The Exchange has a range of social software affordances, allowing players to create lists of favorite items, to “like” certain creations, to “friend” particular creators, etc. In addition to UGC, The Exchange also features content available from Maxis that players can purchase (with real money). However, unlike in the Second Life Marketplace, players cannot sell their own UGC via The Exchange.

EA/Maxis claims that players have uploaded over 3.5 million creations.

Site Rules

The Sims 3 Exchange has terms of service that forbid uploading infringing content. The site also lists an agent to receive DMCA takedown notifications. Forums on the site suggest that some content has been removed in response to DMCA notices. Many discussions in the forums touch on copyright issues, though few posts reflect accurate understandings of the law and many confuse copyright infringement with anti-plagiarism norms. For instance, in response to a post entitled “What about copyright?” and asking whether permissions might be required to copy characters from Marvel comics, one player replies:

I remember with the sim 2, several websites had to remove their clothing and their items. The reason was that they had used disney characters and images on those clothing and items. Disney was not happy. So they went to the websites and demanded the stuff be taken down. I can see something similar happening now. To everyone reading: Get permission from the image makers. ALWAYS give a link or credit to the person who creates the image- even if you have permission to use it.

Avatars

The Sims 3 has an in-game avatar creation tool that is highly flexible. It is also possible to make customized avatars by working with the game files outside of the game software, and then include the models into the game. This form of out-of-game modding has been very popular in The Sims franchise, as Siivonen (2011) and Wirman (2011) describe in detail. In her doctoral thesis, Wirman (2011) analyzes the many ways in which women players of The Sims 2 used modification tools and how these uses confirmed or defied dominant theories of fan culture.

Over 1 million avatars were posted on The Sims 3 Exchange at the time of sampling.
Sampling Method

A member of the research team obtained a systematic sample of 100 of the most recent 8,000 avatars on The Sims 3 Exchange during a weekday afternoon in 2013. The total population constituted roughly a week of new uploads to The Exchange, or the most recent 1% of all The Sims 3 avatars.

Sample Characteristics

Within the sample set, 95 unique authors were identified, suggesting that over 500 users contributed to the most recent 8000 avatars. Three quarters (76%) of the avatars were female, while one quarter (24%) was male. While the majority of the avatars were of “young adult” age, there were also “teen” and “adult” avatars, as well as eight avatars that were toddlers or children. (Avatars of toddlers and children can be used to assemble player-created “households” as will be explained below.)

Copyright Implications

Overall, 9% of the avatars were identified as referential to copyright-protected works, with a subset of 2% of the sample (two works) being deemed similar to the copyright-protected work (Superman and an anime character). Neither of the two similar works was deemed to be a transformation.

Thus, while seven of the avatars in the sample set were clearly intended to invoke characters from copyrighted works, they did so only through naming and replicating general characteristics. For instance, a child avatar named “Bella Esmay” was clearly a reference to a character from the Twilight series, yet the avatar had no characteristics that were similar to the character.

A closer case was an avatar named “Awatara,” with blue skin and pointed ears, clearly referential to a female Na’vi from the motion picture Avatar. (At the time of the film, various players apparently attempted to create blue-skinned Na’vi characters in The Sims 3.) In the opinion of the researcher, however, despite the clear reference to the Avatar movie, any copyright interest in the Na’vi could not extend to prohibit all blue-skinned avatars with pointed ears and long braided hair.
Popularity and Referential Works

The Exchange tracks the number of times a particular work has been downloaded. As shown in Figure 13, we observed no significant correlation between the number of times a particular work was downloaded and whether the work was referential to a recognized work. The median number of views for non-referential works was 51 and the median for referential works was 52. However, non-referential works generally had a high number of outliers.

It should be noted that the most popular two non-referential works were arguably referential to celebrities, being (perhaps) thinly veiled versions of popular supermodels and actresses. The most downloaded avatar, “Tyra Feenstra,” had 767 downloads and appeared to be based on Kim Feenstra, a popular European model. The name was (perhaps) an amalgam of Kim Feenstra and Tyra Banks, another famous model. The second most downloaded avatar, with 743 downloads, was “Brenda Cruz,” a character somewhat resembling and presumably based on Penelope Cruz. The research team lacked expertise in fashion supermodels and therefore may have missed other veiled references to celebrities of the “Tyra Feenstra” variety.

Other IP Issues

About 5% of the sampled avatars contained references to trademarks. None raised concerns about indecency. Four works were recognized as (at least potentially) referential to living individuals and two of these avatars were very popular, as mentioned above.

17. Sims 3 Households (Recent)

While The Sims 3 can be played with a single avatar, players also have the option of managing households of avatars with pooled resources. Households create greater possibilities of drama and interaction (e.g. raising children), so household compositions are not purely cosmetic, but may influence the enjoyment of game play. Over 300,000 Sims 3 households were posted on The Exchange.

We took two samples of households, one of recent household uploads and one of the 100 “most downloaded” households. For the recent households, a member of the research team obtained a systematic sample of 99 of the most recent 8000 households on The Sims 3 Exchange during a weekday afternoon in 2013.
Sample Characteristics

Within the sample set, 96 unique authors were identified, suggesting that over 700 players contributed to the most recent 8,000 households. Roughly half of the households were avatars of mixed genders. Roughly a third were all-female households and 15% were all male. The national affiliation of creators was identified on the Exchange, allowing this variable to be analyzed as well. 63% of the households were created by players who selected “English” (UK or USA), 10% were identified as “German,” and the remaining households were from numerous other countries (e.g. Japan, France, China, Russia, Norway, Finland).

Copyright Implications

Overall, 12% of the avatars were identified as referential to copyright-protected works, though 3 of these were referential to (and similar to) The Sims 3 families created by Maxis. Excluding those 3 households, 9% of the households were referential with a subset of 4% of the sample being deemed similar to the copyright-protected work. None of the works were deemed transformations.

As with the avatars, referential works that were not similar included households and character names clearly intended to invoke television, film, and video game characters (e.g. “James Bond”) but that did not resemble the referenced characters under the substantial similarity test. Similar households included the Weasley family from the Harry Potter books and the ensemble of characters from the Scooby Doo cartoon series. While the researcher concluded that none of the individual Sims in the Weasley family were similar to the characters in the Harry Potter books, it was concluded that the total ensemble, labeled as the Weasley family (and including Harry and Hermione), were similar as a creative compilation of individually unprotected elements.

Figure 14: #17.9 (Weasley family)
Popularity and Referential Works

The Exchange tracks the number of times a particular household has been downloaded. Mean downloads were approximately 22 and we found no significant correlation between the number of times a particular work was downloaded and whether the work was referential to a recognized work. The most popular household had 404 downloads. It was named “Breslin,” was uploaded by a user of Greek nationality, and consisted of eight young women. We searched for some external reference for this family, but could find none.

Other IP Issues

About 9% of the sampled avatars contained references to trademarks. None raised concerns about indecency. The only recent household featuring a celebrity (possibly) consisted of a single avatar named “Van Halen.” The research team concluded that this Sim somewhat resembled Eddie Van Halen, the guitarist for the rock band Van Halen.

18. Sims 3 Households (Top 100)

To evaluate whether popular households in The Sims 3 might demonstrate different levels of referential practice, we decided to sort UGC households by downloads and analyze only the most popular 100 households during a weekday afternoon in 2013. (Note: This was a limited population, not a sample.)

The most downloaded household had 60,962 downloads. Entry 100 had 4,557 downloads, roughly ten times the most popular item in the previous sample set, and roughly two hundred times the mean downloads in the most recent 8000.

Population Characteristics

Within the top 100 households, 69 unique authors were identified, with one author being responsible for five households. Authors of multiple households often had multiple households based on specific references (e.g. Goth families, supermodels, Disney princesses, the Twilight series). Households from German users were more prevalent in this set (21%), as were all-female households (51%). German users created 5 of the top 10 most downloaded households.
Copyright Implications

Overall, 24% of the top 100 households were identified as referential to copyright-protected works, with a subset of 13% of the sample being deemed similar to the copyright-protected work. None of the works were deemed transformations.

In addition to Disney princesses and the Twilight series, there were multiple film and television references, including several households based on the European “Top Model” show. Generally, as with the prior samples, a number of households were clearly referential but failed to include avatars that closely resembled the referenced works.

Popularity and Referential Works

The top 100 Sims 3 households contained a significantly higher level of referential works than the recent sample. Within the population, the chart in Figure 15 shows the frequency of downloads among referential and non-referential households. Though the higher number of referential and similar works in this set suggested that referential works were more common among the top 100 downloads, there was no significant correlation between the referential nature of a households and downloads within the top 100. Referential and non-referential works were evenly distributed across the top 100 households and the mean downloads for both referential and non-referential works was approximately 11,000.

Other IP Issues

No Sims households raised concerns about indecency, but trademark and publicity concerns were fairly pronounced. About 22% of the sampled avatars contained references to trademarks. 6% of households raised right of publicity concerns (e.g. the Obama family, Hugh Hefner with models, the Naomi Campbell household).
LittleBIGPlanet is a game created by Media Molecule and published by Sony Computer Entertainment. It is a featured game on the Sony PlayStation 3 (“PS3”) console and the PlayStation Portable (“PSP”). LittleBIGPlanet is not an arcade or real-time strategy game like Spore or a sandbox game like The Sims, but a side-scrolling “platformer” game in which the player’s avatar (or a team of player avatars) jump and race past obstacles to complete an objective. The game is advertised with marketing materials that emphasize its UGC capabilities. For instance, the current website features the following description of LBP: “A world of pure imagination, where people Play, Create, and Share their own levels, games, and other wonderful creations.”

The UGC in LittleBIGPlanet primarily takes the form of custom-created “levels” from both the original LittleBIGPlanet (released in 2008) and LittleBIGPlanet2 (released in 2011). Generally, these user levels feature climbing and jumping challenges with the possibility of original artwork (including photography) uploaded by users and incorporated into the game. LittleBIGPlanet 2 expands the game’s creative affordances with customizable sound and music options, as well as tools enabling players to create non-platformer games (e.g. some ambitious players have created role-playing games, shooting games, 3-D maze games, and chess/checkers games within LBP2).

The associated online website of LittleBIGPlanet and LittleBIGPlanet 2, LBP.me, allows players to share their levels. While the platform has some social software affordances, such as “liking” and commenting on levels, the interface seems to be designed primarily for consoles rather than keyboards, and it is difficult to get a clear picture of the full library of levels being offered. The research team found the platform posed some significant technological challenges for sampling.
However, according to the platform owners, the amount of UGC on the platform is vast. As of 2012, Sony Computer Entertainment reported that over 7 million levels had been created and shared for LittleBIGPlanet on both the PS3 and PSP platforms.

Numerous game studies articles have been written about UGC in LittleBIGPlanet. See, e.g., Sotamaa (2010), Bosch et al. (2011), Harper (2011), Westcott (2011); Koutsouras (2012); Grimes & Fields (2012). These articles generally draw on the existing game studies literature concerning the phenomenon of player productivity in UGC-based games and do not focus specifically on copyright law issues.

LBP.me Site Rules

The LBP.me website, unlike the other UGC sites we surveyed, was based in England and governed by English law. The LBP.me site requests that users do not post infringing content. Sony Computer Entertainment also has a United States website with terms that apply to United States players of the game. This site has separate terms of service that also prohibit posting infringing content and that include provisions for DMCA notice and takedown.

The DMCA provisions have been used with regard to LittleBIGPlanet UGC. In 2008, a number of game journalism sites reported that LittleBIGPlanet was deleting a large number of user-created levels due to copyright infringement concerns. Some players were critical of the practice, claiming it amounted to “censorship” of their creations.

Sampling Method

It was difficult, given the game’s interface, to obtain an accurate picture of the full variety of UGC levels on LittleBIGPlanet. We limited our survey to a systematic sample of 80 of the “most hearted” 2,000 works uploaded to LMP.me during a weekday afternoon in 2013. Within the sample set, 76 unique authors were identified.

Copyright Implications

Overall, 39% of the levels were identified as referential to copyright-protected works, with a subset of 31% of the sample (twenty-five levels) being deemed similar to the copyright-protected work. None of the levels were deemed transformative, since none were clearly parodic or critical in nature.
However, some of the levels sampled would probably support arguments for transformation. For instance, sampled levels based on the board game “Hungry, Hungry Hippo,” Michael Jackson’s “Thriller,” and the video game “Call of Duty,” were all humorous and incongruous when transformed into the visual idiom and game play of LittleBIGPlanet.

The copyright references noted by researchers were quite varied. Some levels incorporated unauthorized posters and images, some included avatars deemed similar to protected characters, and some incorporated recognizable music.

**Popularity and Referential Works**

Screens for LittleBIGPlanet levels contain a variety of metadata fields including “smileys”, “hearts,” download counts, keyword tags, star ratings, etc. The histogram in Figure 16 shows the comparative heart counts for similar and referential works.

Utilizing the Mann-Whitney U, we did observe a statistically significant correlation (p=.009) between the referential status of a level and the number of hearts the level received. Referential levels were more likely to receive a higher number of hearts (see Figure 16, bottom). However, no significant correlation was found when the 31 similar levels were compared with the remaining levels (see Figure 16, top). So while referential works were more likely to receive more hearts, similar works did not show the same correlation.

Not surprisingly, we found statistically significant correlations between the number of times levels were played and how many hearts they received, between how many times they were played and how well they were rated by players, and between how many hearts levels received and how well they were rated.

The “most hearted” level within the sample set was “Little Dead Space,” with 271,529 hearts, based on EA’s space-based horror/shooting
game Dead Space. (See screenshot in Figure 17.) This level is discussed in detail by Koutsouras (2012), who explains the similarities between the level and Dead Space. The level was deemed similar to the original game by the researcher investigating this sample set. The second “most hearted” level within the sample set, with 117,617 hearts, was “MotorStorm,” which is published by Sony Computer Entertainment for the PS3. The Motorstorm level was deemed referential to the game, but not similar.

Other IP Issues

About 16% of the sampled level contained recognized trademarks. One level raised right of publicity concerns—the one based on Michael Jackson’s “Thriller” video. No levels raised concerns about indecency.

Notes on LittleBIGPlanet

Our study of LittleBIGPlanet was not extensive and we did not have the opportunity to compare our sample of “most hearted” levels with a more representative sample of recent levels. However, it is notable that referential practices were high and very close to the level of referentiality found in our Spore Adventures sample. Both “map” forms of UGC seem to raise more copyright concerns due to the fact that multiple components of the work (e.g. avatars, scenery, and sound) can infringe third-party copyrights. Also, as with Spore Adventures, the possibility of “remix”-based arguments appear to be stronger with respect to these more complex forms of UGC.
Minecraft is a “sandbox” genre game originally created for the PC by Markus Persson and now developed and published by Mojang, his company. Versions of the game also exist now for the Xbox 360, Android, and iOS platforms. As of January 2013, Mojang claimed it had sold over 20 million copies of Minecraft across various platforms.

While Minecraft, like LittleBIGPlanet, is a UGC-based game that can be played in solo or multiplayer modes, its gameplay and its technology are different in several respects from Spore, The Sims 3, and LittleBIGPlanet. The Principal Investigator has discussed UGC within Minecraft in Lastowka (2012a):

To play Minecraft is to use the game as a creative tool... Players spend most of their time simply “mining” and “crafting” blocks of virtual materials, hence the game’s name. Once players have gathered and crafted a sufficient inventory of resources, they use these virtual acquisitions to design customized homes and landscapes, often building all manner of blockish structures. Minecraft has been called a building block game and is more or less analogous to a digital box of simulated Legos—with a healthy dash of The Lord of the Rings thrown in.

Minecraft requires players to be creative, even if that creativity is limited to designing a crude shelter or tunneling the layout of a mine. But most players don’t stop there. Digging a mineshaft leads almost inevitably to the creation of large underground caverns and mountainside fortresses. Building a simple house leads to the construction of another story for that house, and then a tower, then villages,
then monumental sculptures, and finally feats of complex engineering, such as
dams, bridges, and roller coasters (Lastowka, 2012a).

As this excerpt explains, simply playing the game of Minecraft results in fixed virtual structures
that can be characterized as forms of UGC. Because structures are functional within the game
environment, some players may not regard their play as fundamentally creative, but it is clear
that many players do use the interface as a sculptural tool.

However, while players of Minecraft invariably create things, the game interface (unlike Spore,
The Sims 3, and LittleBIGPlanet) lacks built-in tools for directly sharing user-generated content
with other players outside particular game environments. So, at this point, a wide variety of
websites and applications exist (with Mojang’s apparent consent) that serve as platforms for
Minecraft UGC, allowing players to share customized avatars, maps, and other Minecraft
modifications. Minecraft-related UGC is also popular on many general UGC sites, like
YouTube.

However, as Wirman (2011) discusses with respect to The Sims 2, out-of-game modding requires
some level of basic technological proficiency, which might create hurdles for players wishing to
share their Minecraft UGC with others. Certainly not all Minecraft players are using third-party sites
to share the UGC they create within or around Minecraft.

As is the case with Spore, The Sims 3, and LittleBIGPlanet, Minecraft players can create and
share customized avatars. Because Minecraft adopts a “retro” video game aesthetic (blocky and
pixilated graphics) and uses fairly simple code, players can modify the avatar files for Minecraft
by using any basic “paint” program to create the front, back, and side views of the avatar. Thus,
unlike Spore, The Sims 3, or LittleBIGPlanet, the tools for avatar creation are not specific to
Minecraft. (Some custom applications for creating avatars do exist.) Due to the simplicity of the
avatar file structure, all avatar skins ultimately have the same “blocky” appearance. For example,
see Figure 18, which shows the heavy “pixilation” of a standard avatar.

For our two samples of Minecraft avatars (commonly known as “skins”), we obtained UGC
from two independent sites: The Skindex and PlanetMinecraft.

The Skindex

At the time of sampling, there were approximately 845,000 Minecraft skins posted on the site.
The Skindex features its own editing tool for creating skins, including the skins uploaded by
other users. The Skindex also features some social software tools, enabling users to comment on
specific skins and to “follow” particular skin creators.
Site Rules

The terms of service of the Skindex prohibit uploading infringing content. In the terms, the site states that it will take down infringing content quickly upon notice, echoing the general concept of the DMCA if not conforming to its specific requirements. On the upload page, the Skindex warns users against uploading spam, obscenity, invisible skins, incomplete skins, and other inappropriate practices. Notably, the site has a built-in mechanism for reporting “stolen skins” and for flagging “inappropriate” skins, though there is no clear explanation of either of these categories.

Sampling Method

A member of the research team obtained a random sample of the 845,000 skins on the Skindex during a weekday afternoon in 2013. Because the individual skins on the Skindex are hosted at URLs corresponding with unique numerical and sequential IDs, random sampling of the site’s full library was fairly simple.

Sample Characteristics

[Images of various Minecraft skins]

Within the sample set, all authors were unique, making it probable that 5000 or more users contributed to the total population of 845,000 Minecraft skins.

As discussed above with respect to Second Life avatars, numerous game studies researchers have explored the issue of avatar gender and the sexualized nature of many female avatars in games (Cassell & Jenkins, 1998). The default avatar of the Minecraft game is named (in the game’s code and popularly) “Steve.” Some players have complained that there are no female avatars in the game by default. Given the blocky appearance of avatars, the original developer of the game, Markus Persson, once claimed to a reporter that he was unable to “make a girl” in Minecraft’s blockish style, suggesting that all Minecraft avatars are male. This led at least one player to develop and distribute a mod to create more sexualized female avatars. However, Persson later clarified that he did not consider “Steve” to be a male avatar, but instead considered all avatars and animals in the game, including “Steve,” to be gender-neutral.

Despite this claim, it is clear that some players who create skins have attempted to create avatars with female genders within the standard template. The research team was sensitive to the difficulties of coding the sample set for gender, but given the interest expressed in avatar gender by some members of the Minecraft community, we attempted to assess this variable. Using names and clothing as a (problematic and admittedly subjective) proxy for intended gender, we
found that 14% of the skins expressed a female gender, 37% expressed a male gender, and 49% were ambiguous or non-gendered avatars.

Copyright Implications

The avatars in the Skindex sample set were similar to the avatars of The Sims 3 in that many were referential without being similar to the work being referenced. Overall, 33% of the avatars were identified as referential to copyright-protected works. However, the avatars exhibited a significant level of internal referentiality. Of the referential works, 12 of the 33 were deemed referential to intellectual properties from Minecraft itself (i.e., creepers, Steve). Excluding works referencing Minecraft, 22% of the avatars were referential to extrinsic works and only 6% of the avatars were deemed similar to extrinsic works (e.g., Link from Legend of Zelda, Captain Crunch, Doctor Who).

Popularity and Referential Works

The Skindex tracks the number of times a particular avatar has been viewed, allowing us to assess the relationship between referentiality and popularity. The mean view count of non-referential avatars was 83, while the mean view count of referential avatars was 104. Utilizing the Mann-Whitney U, we did observe a statistically significant correlation (p=.017) between the referential status of an avatar and the number of views the avatar received. The histogram in Figure 19 demonstrates this correlation. While it is statistically significant, the correlation does not appear to be very strong.

The most viewed avatar was a non-referential avatar—specifically, a male avatar named “Cool Man HD,” which received 499 views. The most viewed referential avatar was a version of Link from Legend of Zelda, with 269 views.

Other IP Issues

About 20% of the sampled avatars contained references to recognized trademarks. Given the simplicity of Minecraft avatars, these were generally situations where cartoon characters served
as trademarks or the names of avatars corresponded with trademarks. 7% of the avatars were recognized as referential to living individuals (e.g. Will Smith, Psy, Tori Vega). None of the avatars on the Skindex raised concerns about indecency.

21. Minecraft Avatars (Planet Minecraft)

Planet Minecraft is another website that hosts a variety of Minecraft-related UGC, including avatar skins. It describes itself as a “Creative Community Fansite.” In addition to avatars, the site offers information about Minecraft-based collaborative building projects, blogs, open multiplayer servers, contests, chat rooms, and video streams.

It may be worth noting that the precise ownership structure of Planet Minecraft is not immediately obvious to site users. It is unclear what entity owns the site and whether it is based in the United States. The site does not list a physical contact address and its domain name is hosted by a company in Utah that does not publish information about the owners. There is currently a list of administrators of the site, but this list generally uses Internet “handles” rather than full names.

We took our first sample from Planet Minecraft to compare the avatar UGC there with that of the Skindex. At the time of sampling, there were approximately 650,000 Minecraft avatars posted on the Planet Minecraft site.

Site Rules

The terms of service of Planet Minecraft prohibit uploading content that “is unlawful, abusive, threatening, harmful, obscene, lewd, offensive, defamatory or otherwise objectionable” or that “might infringe the intellectual property rights, privacy rights, rights of publicity, or other proprietary rights of others.” The site does not appear to have a designated agent for DMCA notice and takedown procedures.

When a player uploads a skin, the site warns the user:

Do Not Upload:

- Skins that someone else created.
- Recolored or Pixel Adjustment Skins - Example: Changing eyes, adding noise, shirt color, etc.
- Remix Skins without Permission & Credit - Example: Using another skin as a base or using skin parts you didn’t create

Users on Planet Minecraft can “flag/report” skins that they believe violate the site’s policies.
Sampling Method

A member of the research team obtained a systematic sample of the most recent 20,000 avatars posted on Planet Minecraft during a weekday afternoon in 2013—a population consisting of the most recent 3% of the total skins made available on the site.

Sample Characteristics

Within the sample set, there were 99 unique authors, making it probable that over 1000 users contributed to the total population of 20,000 avatars. As with the Skindex, we decided to code the avatars for gender. Gender expressions were roughly the same for the Planet Minecraft avatars as they were for the Skindex avatars. 17% of the avatars were coded as expressing a female gender, 37% were coded as expressing a male gender, and 46% were deemed ambiguous or non-gendered.

Copyright Implications

The Planet Minecraft avatar sample deviated significantly from the Skindex sample, showing a higher degree of referential practices. Overall, 44% of the avatars (as opposed to 33%) were identified as referential to copyright-protected works. However, there was a slight “Grox effect” to these numbers. Of the referential works, eight were deemed referential to intellectual properties from Minecraft itself. Excluding works referencing Minecraft, 35% (as opposed to 22% on the Skindex) of the avatars were referential to extrinsic works and 22% (as opposed to 6% on the Skindex) of the avatars were deemed similar to extrinsic works.

Popularity and Referential Works

Planet Minecraft tracks both the number of times a particular avatar has been viewed and the number of times an avatar has been downloaded. The number of downloads strongly correlated with the number of views an avatar received. While referential avatars and similar avatars had
higher mean and median views than the general population, no statistical significance was observed.

The mean number of views for all avatars was 56. As with the Skindex sample, the most significant referential outlier was a version of Link from Legend of Zelda. This skin received 768 views.

Planet Minecraft members gain “levels” for participating in the community and uploading content. We decided to test whether the “level” of a creator correlated with whether the creator primarily created referential or similar avatars. We discerned no such correlation.

However, utilizing the Mann-Whitney U, we found a statistically significant correlation (p=.020) between the level of a creator and the number of times a particular avatar was viewed. A scatterplot of this relationship can be seen in Figure 21. It seemed that the recent work of Planet Minecraft “veteran” creators received somewhat more attention, on average, than the skins of newcomers.

Other IP Issues

About 27% of the sampled avatars raised potential trademark concerns, primarily due to the names of video game and cartoon characters. None raised concerns about indecency. Two of the avatars were recognized by the research team as referential to individuals with potential right of publicity claims, i.e. Morgan Freeman and Elvis Presley. (Note: Though Elvis Presley is believed to be deceased, the Elvis Presley Estate continues to administer his right of publicity.)

22. Minecraft Maps (Planet Minecraft)

In addition to various other forms of UGC, Planet Minecraft offers “map” files, which are similar to Spore Adventures or the levels of LittleBIGPlanet. Minecraft maps are essentially environments that creators build for other players to explore. Minecraft maps are generally less “scripted” than either Spore Adventures or LittleBIGPlanet levels, given that the tools in Minecraft lend themselves less to narrative creativity and more to architectural creations. Still, creators can make “adventure maps” that contain challenges and some form of narrative resolution.
Sampling Method

A member of the research team obtained a random sample of 53 of approximately 20,000 projects matching the term “map” on Planet Minecraft during a weekday afternoon in 2013. Unfortunately, this sample was somewhat smaller than the 100 items norm for the project, and was partially attributable to some technological difficulties: specific maps often required specific sets of related modification files and specific versions of the Minecraft game. Given the smaller sample size, the Minecraft map sample characteristics should describe the characteristics of the total population with 95% confidence and a 14% (rather than 10%) margin of error.

Sample Characteristics

The metadata for the Minecraft maps on Planet Minecraft was not as straightforward as that in many of the other samples. Specific creator information was unavailable for over half of the maps sampled, making it impossible to determine the number of unique creators in the sample set. (This problem ties back to our discussion, in the previous section on methodology, of the practical difficulty of obtaining statistical accuracy when sampling the more amorphous social practices involved in the creation of game mods and other collaborative projects.)

Copyright Implications

Roughly 10% of the sample (five maps) primarily referenced literary works or motion pictures (The Hunger Games, Lord of the Rings, Inception). Roughly 11% (six maps) referenced video games (Halo, Pac-Man, Super Mario, Portal). Roughly 30% of the works were architectural in nature, featuring some sort of single building or structure. Overall, 34% of the maps (18 maps) were referential and 15% (8 maps) were deemed similar to the referenced works. The non-referential maps were often quite elaborate original creations—the detail of the structure in Figure 23, for instance, was not exceptional.
All of the referential maps were unusual, creative, and interesting, if for no other reason than the inherent challenge posed by translating the work into Minecraft’s blocky and pixelated style. Like Spore Adventures or LittleBIGPlanet levels, these works were more likely to resemble paradigmatic remix or mashup forms of creativity and to raise potential transformative fair use arguments. An example is Figure 24, a version of Pac-Man created within the Minecraft game. The map is clearly intended as a faithful tribute to Pac-Man and borrows the game’s maze configuration—it is not critical or a parody. However, the item was found to be not similar to Pac-Man, given the dissimilarity of the 2-D game and the blockish 3-D map.

Where similarity was established, only one of the maps was deemed to be a clear instance of transformation. This was a faithful rendition of Disneyland Paris as a Minecraft adventure, shown in Figure 22. This map was an adventure map that juxtaposed a generally faithful rendition of Disneyland Paris with a narrative including stock elements of Minecraft games (surviving deadly creeper attacks). The result turned Disneyland Paris into a sort of death trap and there was clearly a desire by the creator of the map to alter the park’s cheery themes in this way. The researcher conducting the fair use analysis felt this was clearly a transformative use of Disney’s copyrights in the park’s architecture and features.

Other IP Issues

Roughly 28% of the maps raised trademark concerns that were generally related to the copyright concerns presented. No maps raised concerns about indecency or rights of publicity.
Notes on Minecraft

We found it interesting that the percentage of referential and similar avatars on the Skindex and Planet Minecraft, once controlled for Minecraft-related works, was more analogous to the percentage found on the Second Life Marketplace than it was to the avatars on Spore or The Sims 3.

There are many possible explanations for this congruence and variance. For instance, both Minecraft and Second Life push UGC creators to employ more flexible creative tools to design their avatars, while The Sims 3 and Spore push the use of built-in software that somewhat restricts player-authorial capabilities. Also, both UGC platforms (the Second Life Marketplace and the Skindex) are forums that are less integrated into the game software than is the case with the two EA titles, making it likely that fewer UGC creators in Second Life and Minecraft will share their avatar creations. Those who do choose to share avatars will be a subset of creators, and this subset may be more likely to engage in referential practices. A similar phenomenon of self-selection may explain the variance between DeviantART and Sketch Club referential practices. Of course, other explanations are also possible.

The referential practices with respect to Minecraft Maps track fairly well with the results for LittleBigPlanet levels and Spore Adventures. Original content dominates the results, but referential practices related to popular works were present in a substantial amount of the UGC sampled and “remix” forms of player authorship were fairly common.
ModNation Racers is a kart racing game for Sony’s PS3 platform. It was developed by United Front Studios and first released in 2010. Marketing for the game, like marketing for LittleBIGPlanet, emphasized the centrality of user-generated content. The game and associated website allows players to upload and download customized avatars, vehicles, and racetracks.

Also like LittleBIGPlanet, since the game’s release, player creativity has been a key feature of press coverage of the game. As June 2010 story in IGN (a leading gaming site) was entitled “ModNation Racers: The Coolest Nintendo Creations,” and explained:

Yes, if the Mario statue that’s been up in the ModSpot since day one didn’t clue you in, ModNation artists love the Big N. The company practically created kart racing as we know it, so it’s no surprise that fans are wanting to be classic characters as they tear around the ModNation tracks.

Given that Nintendo has its own popular Mario-based kart racing for the Nintendo Wii platform, it is at least curious, from an intellectual property perspective, that journalistic outlets are acknowledging the incorporation of classic Nintendo characters into a Sony game via UGC.
Site Rules

ModNation Racers, with regard to US-based users, is governed by the same terms of service that govern LittleBigPlanet, since it is a game for Sony’s PS3 platform. These terms prohibit posting infringing content and include provisions for DMCA notice and takedown.

The forums of ModNation, like the forums of many other sites discussed, feature vibrant discussions of users attempting to sort out whether their practices raise copyright infringement issues. For instance, in response to a user post asking why all the mods on “shows and games” don’t raise copyright issues, other users respond:

Whether it is copyright or not is debatable since some would argue that it is merely fan art.

Either way though it is non profit so as the owner of the copyright woud you really be all that bothered?

...

I wouldn’t be concerned if you are worried abut copyright issues though, I highly doubt you’re going to get sued.

Another user states:

although the characters themselves are copyrighted , and so is "licensed " art associated with said characters . the implementaition of them here fall well within "fair use " exemptions included with copyright laws just as you cant be sued for doodling spider man onto a piece of paper ... same goes here .

And another states:

Fair use, in the legal sense, does NOT include the random use, manipulation or alteration of another copyright holders work. If you use the works or creations of any copyright material(s) without either written permission or the legal requirements of "permission to use", one is legally stealing and in violation of the Copyright Act of the United States.

The games journalism press has noted the copyright questions concerning ModNation as well—a 2010 article in Joystiq, a popular gaming site, is entitled: “Copyrighted characters dominate ModNation Racers' top creations” and contains screenshots of UGC avatars based on Nintendo’s Mario and Marvel’s Iron Man.

We took two samples of ModNation UGC: one of recently uploaded avatars and one of the most popular avatars, as featured on the game’s associated website. For the recent avatars, a member of the research team obtained a systematic sample of 100 of the most recent 4,200 works uploaded to the ModNation website during a weekday afternoon in 2013. Using the date stamps on the avatars as a rough gauge, this population covered the three most recent days of avatar uploads.
Sample Characteristics

Within the sample set, 92 unique authors were identified, suggesting that over 300 users were actively uploading avatars to the site during the three-day period.

Copyright Implications

The extent of referential practices in the population of recent avatars was roughly similar to what was found in the Minecraft and Second Life avatar populations – referential practices were substantial, but they did not predominate. 33% of the works were identified as referential to copyright-protected works, with a subset of 19% of the sample being deemed similar to the copyright-protected work. The majority of references were avatars based on characters from videogames, comic books, and movies (e.g. Finn from the Adventure Time cartoon, Sonic the Hedgehog, and Marvel's Spiderman). None of the avatars were deemed to be clearly transformations of the referenced works.

Popularity and Referential Works

The ModNation website tracks the number of times a particular work has been downloaded, viewed, and used in a race. It also allows users to rate avatars on a five point scale.

In the sample set, the mean number of user views for referential avatars was 1. For non-referential avatars, the mean number of user views was 24. However this high mean was based entirely on one extreme outlier, a non-referential avatar named “Dead Soldier” (Figure 25) that had received 1,589 views. (Note that while there are certainly plenty of popular works featuring skull-faced soldiers, we did not recognize any specific reference here.)

Excluding that outlier, the mean number of views for non-referential works dropped to .24, significantly lower than the mean for referential works. Excluding the “Dead Soldier” outlier, we
found a statistically significant correlation between the number of times a particular work was viewed and whether that work was referential \((p=.022)\). As shown in the histogram in Figure 26, the number of views at issue is low, but recent referential works were slightly more likely to be viewed by users than recent non-referential works.

ModNation also tracks the number of times an avatar has been used in a race, has won a race, and has been “liked.” These statistics generally corresponded with the category of views. The median for both referential and non-referential works was zero in all of the above categories, suggesting that the most recently uploaded avatars had not generally been viewed or used by other ModNation players, at least during the first few days of their presence on the platform.

**Other IP Issues**

About 14% of the recently uploaded avatars contained recognized trademarks, with the avatar or its name constituting the trademark in question. Four avatars were modeled on celebrities. These four included two famous racecar drivers: Sergio Pérez and Ayrton Senna, as well as “Flo” from the Progressive car insurance commercials and Aaron Hanson (“Egoraptor”) an online animator and cartoonist. None of the avatars raised concerns about indecency.

**24. ModNation Racers Avatars (Most Downloaded)**

As a point of comparison, a member of the research team obtained a systematic sample of 100 of the “Most Downloaded” 4,200 avatars on the ModNation website during a weekday afternoon in 2013. We should be clear that the sample was not of the “top 100” avatars (as we did in The Sims 3), but instead a systematic step-counted sample of the top 4,200.

**Sample Characteristics**

Within the sample set, 91 unique authors were identified, suggesting that over 300 users were represented in the most downloaded 4,200 avatars. We found it interesting that this was roughly the same level of creator diversity that was present in the most recent sample set.
Copyright Implications

As can be seen in the chart above, there was a much higher rate of referential practice with regard to the set of “most downloaded” avatars on the ModNation website. Overall, 86% of the works were identified as referential to copyright-protected works, with a subset of 70% of the total sample being deemed similar to the copyright-protected work. The majority of these works were references to characters from videogames, comic books, and movies (e.g. Mickey Mouse, Boba Fett from Star Wars, Planters’ Mr. Peanut). These avatars were certainly creative and skillful, but none were deemed to amount to transformations of the referenced works.

Popularity and Referential Works

As we noted above, we took a systematic step sample of the most popular 4,200 avatars. The mean download count of 86 referential avatars was 3,912 and the mean download count of the 14 non-referential avatars was 1,315. The most downloaded avatar was (by design), the first entry, “Shadow” from Sonic the Hedgehog, with 90,175 downloads and 15,126 views. The next most downloaded entry was Mr. Peanut, with 40,532 downloads and 5,560 views.
The classic power law distribution shown in Figure 27 suggests that the “top downloads” interface drove user traffic primarily to the first few pages of avatars, and that few players looked past those pages. As Figure 27 shows, the number of downloads of avatars dropped precipitously into a “long tail” of less frequently downloaded content.

As Figure 27 also shows, the total downloads of the first four avatars (i.e. the four avatars on the first four screens of the user interface) accounted for more than half of the total downloads in the total population and the first 21% of the sample accounting for 80% of the downloads.

This distribution is not so remarkable—the histograms displayed above with respect to other samples generally confirm with a similar popularity skew in many of the other populations we sampled. The particular distribution in Figure 27 also accords with the common Pareto Principle or 80-20 distribution, which has been observed by other researchers with respect to UGC videos hosted on YouTube (Cha et al., 2007).

Within this set, utilizing the Mann-Whitney U, we observed an insignificant \( p = .150 \) correlation between the number of times a particular avatar was viewed and whether the work was referential to a recognized work.

Notably, the number of views for avatars did not correspond neatly with downloads. As displayed in Figure 28 (which excludes certain outliers), among the set of avatars that were lower in the download order, there was considerable variance in the number of times they were viewed and downloaded. Some avatars were frequently viewed, but not frequently downloaded, whereas some others were had a higher ratio of downloads to views.

Other IP Issues

Tracking the more referential nature of the “Most Downloaded” sample set, about 34% of the sampled works contained recognized trademarks. Again, these were generally cartoon characters deemed to possess a trademark status in certain contexts. Only two avatars in this set were modeled on celebrities (Bob Marley and Michael Jackson). None of the avatars raised concerns about indecency.

Notes on ModNation

While the set of recent ModNation Racer avatars was roughly consistent with the referential practices found on other UGC sites, the “most downloaded” category was substantially
dominated by referential UGC. There could be multiple explanations for this fact. One hypothesis would be that due to early publicity highlighting the fan avatars, ModNation Racers players established an expectation that fan practices would be dominant on the platform. Another hypothesis would be that the UGC tool set offered in ModNation Racers nudges creative practices in a way opposite to the tool set in Spore. ModNation forces creators to conform to a sort of “bobblehead” design, a format that might be more conducive to referential forms of creativity. Of course, other possible explanations exist as well.

25. Civilization V Maps

Steam is a digital distribution and digital rights management platform developed by Valve Corporation, a well-known development studio specializing in PC games. Steam was originally PC-based and its offerings were limited to Valve’s own proprietary games. However, the platform recently expanded and now operates on MacOS and the Sony Playstation 3. Thousands of independently created games are now available for purchase on Steam.

The Steam site operates as a social networking platform as well as a gameplay platform. Steam users can designate friends, be alerted when friends are playing games, engage in cooperative and competitive play with other users, send messages to other users, create and share lists of favorite content, trade virtual items with other users, engage in forum conversations, chat and voice chat with other users, etc.

Steam Workshop is a Steam-based system for sharing user-generated content created for Valve and third-party games. Steam users can subscribe to UGC feeds for particular creators as well as
rate and comment on creations. UGC creations in Steam Workshop take many forms, depending on the affordances offered by the game in question.

**Site Rules**

Steam’s terms of service prohibit uploading UGC that infringes on the rights of third parties and requires users to warrant that if they do post content created by others, they have permission to post that content. Steam complies with the DMCA notice and takedown procedures and has an automated DMCA notice submission page. Steam also explicitly grants users a license to include Valve’s works into their UGC, as long as the UGC remains non-commercial. During the summer of 2013, this was the applicable language in the terms of service:

**D. License to Use Valve Game IP in Fan Art.**

Valve appreciates the community of Subscribers that creates fan art, fan fiction, and audio-visual works that reference Valve games (“Fan Art”). You may incorporate content from Valve games into your Fan Art. Except as otherwise set forth in this Section or in any Subscription Terms, you may use, reproduce, publish, perform, display and distribute Fan Art that incorporates content from Valve games however you wish, but solely on a non-commercial basis.

If you incorporate any third-party content in any Fan Art, you must be sure to obtain all necessary rights from the owner of that content.

As with the other sites surveyed, there were several forum discussions concerning IP issues. The following is a reply to a discussion on the possibility of creating new game modifications based on the Star Trek franchise. One user suggested IP rights might present a problem, but another user replies:

And about the copyright; how has that stopped anybody else? Currently in the most popular mods on Steam Workshop there are LOTR mods (which have a reputation for taking down their copyrighted material ex. look up MERP project for Skyrim) and a Tamerial map with TES civilizations and Game of Thrones mods and so on and so on. So copyrighting isn’t THAT big of a deal that you make it out to be. As long as no money is made of it (which it isn’t) it is perfectly fine.

As with many other platforms, players can flag content on Steam Workshop for violation of the “Steam Online Conduct Rules” (which prohibit uploading infringing UGC).

**Civilization V Maps**

Civilization is a famous turn-based strategy game initially created by legendary game design Sid Meiers (and based on a classic board game). Unlike any of the games previously described, Civilization is a so-called “god game,” where the player guides the course of an empire from its nomadic origins to (at least potentially) outer space exploration. During the course of play, other
civilizations are encountered, led by historical figures with particular strategic tendencies (e.g. Queen Victoria, Ghandi, Genghis Kahn). Players must decide whether to invest in military conquest, trade, cultural capital, etc. and determine how to navigate alliances with other countries (Squire, 2004).

Civilization V was released in 2010, adding various new features to the prior release of the game. The game was integrated into Steam and Steam Workshop, allowing players to upload a range of game modifications. Modifications enable players to change the game’s user interface, to add new content to the standard game (e.g. rulers, technologies, military units, cultures) and to create new Civilization V maps, similar to Minecraft maps, Spore adventures, and LittleBIGPlanet levels. As is the case with Steam generally, a standard range of social software affordances are available. Players can comment on specific mods, indicate favorites, follow particular UGC creators, etc.

We decided, as a point of comparison with Minecraft maps and Spore adventures, to sample the maps made available on Steam Workshop for Civilization V. Unlike most of the other UGC populations surveyed, the number of Civilization V maps on the Steam Workshop was fairly limited: only 317 were present at the time of sampling. So, in this case, we did not sample, but took the opportunity to describe the entire population.

Population Characteristics

Within the population of 317 maps, 192 unique authors were identified. Most authors had created just one or two maps, but one outlier had created 18 maps and the next most prolific had created six maps.

Roughly 37% of the maps were primarily recreations of particular real geographic regions (e.g. Finland, the Great Lakes, Australia, Europe). 9% of the maps were based on specific historical time periods (e.g. China during the third century A.D.).

Copyright Implications

Overall, 30% of the works were identified as referential to copyright-protected works, with a subset of 24% of the sample being deemed similar to the copyright-protected work. None of
the similar maps were deemed to be a transformation of the referenced works. The majority of these maps were referential to worlds created by fantasy authors (e.g. Dune, Middle Earth, Westeros) or video games (Skyrim, Hyrule). A few, however, were maps that were primarily historical or mythological, but that included textual elements that were lifted directly from published books.

**Popularity and Referential Works**

Steam Workshop does not use the term “download” to describe utilizing UGC in Steam games, but instead uses the term “subscription.” Users can subscribe to particular UGC as game modifications, and the creators of the UGC can update these modifications during the subscription term. Users can “unsubscribe” to UGC and those modifications will be removed from their games.

The Civilization V Steam Workshop tracks the number of users who “subscribe” to particular maps. This is a measure of community popularity roughly equivalent to download counts from other sites.

The mean number of subscriptions for referential works was 3,886 and the mean number for non-referential works was 2,405. The majority of maps, as shown in Figure 29, had fewer than 2000 subscribers. Utilizing the Mann-Whitney U, we found a significant correlation between the number of subscriptions to a particular work and whether that work was referential (p=.044). Outlier referential works included two maps based on Game of Thrones with over 30,000 subscribers each. Popular non-referential works were generally historical or geographical maps: e.g. maps based on World War II or the American Revolutionary War.

**Other IP Issues**

About 22% of the maps contained recognized trademarks, generally corresponding with particular content from fantasy literature or video games. One map, entitled “Al Gore’s Antarctica,” was thought to raise a potential publicity issue. None of the maps raised concerns about indecency.

**Notes on Civilization V Maps**

The rate of referential and similar maps on the Steam Workshop was not very surprising. It seemed to be roughly similar to the rates found in similar map/scenario UGC.
26. Garry’s Mod Mods

Garry’s Mod is a game available on Steam that utilizes Valve’s Source game engine. The Source engine was developed by Valve for the Half-Life 2 games and it has since been licensed for use by other developers. Valve describes Garry’s Mod as follows:

Garry’s Mod is a physics sandbox. Unlike regular games there aren’t any predefined aims or goals. We give you the tools and leave you to play. You spawn objects and weld them together to create your own contraptions—whether that’s a car, a rocket, a catapult or something that doesn’t have a name yet—that’s up to you.

While Garry’s Mod includes objects and animations made by Valve, it is also designed as a platform for player modifications—users can create their own maps, avatars, objects, scripts, and game rule modifications. In essence, Garry’s Mod is similar to Second Life, but it lacks Second Life’s virtual marketplace and it features built-in content associated with Valve’s Half Life 2 game.

Figure 30 is a screenshot of the general appearance of Garry’s Mod (including, in this image, some Minecraft-based UGC). Garry’s Mod is sometimes used as a platform for “machinima” (narrative video made using video game engines). Users can stage a scene with avatars, objects, and scripted events, position the game camera, and record UGC videos that feature fairly realistic physics.

Over 180,000 items have been uploaded to Garry’s Mod on Steam Workshop. For our samples of Garry’s Mod UGC, we decided not to focus on maps, but to sample all the items in the population, including scripts, objects, maps, etc.

Sampling Method

A member of the research team obtained a systematic sample of 92 of the most recent 3,000 items uploaded to the Steam Workshop for Garry’s Mod during a weekday afternoon in 2013.
Within the sample set, all the items had unique listed authors. Most items in the same consisted of specific object that could be used in the game, though other forms of UGC were also present.

Copyright Implications

Overall, 14% of the works were identified as referential to copyright-protected works, with a subset of 8% of the sample being deemed similar to the copyright-protected work. Notably, these percentages excluded all recognized references to the Valve content that was included in the items (approximately 16% of items contained characters from Half-Life 2, Team Fortress, and Left4Dead, all which are Valve games). The references to non-Valve works were mostly to other video games (e.g. Sonic, Minecraft, Borderlands) and to popular cross-media franchises (Star Wars, My Little Pony). None of the similar works were deemed to be transformations of the original work.

Other IP Issues

About 6% of the sampled works contained recognized trademarks. None of the items contained images of celebrities or raised concerns about indecency.

27. Skyrim Mods

Skyrim is the fifth game in The Elder Scrolls series of role-playing games made by Bethesda Game Studios. The latest game is available on Xbox, PS3, and PC. The game is set in the Skyrim province of the continent of Tamriel, where the other games in the series also take place. As in most all role-playing games, players of Skyrim rise from a humble status (generally a prisoner in the Elder Scroll series) to amass power and wealth while exploring, fighting enemies, and solving puzzles in the game’s virtual world. Skyrim is a single-player game.

Steam Workshop features various player modifications for the Skyrim PC game, much like the modifications available for Garry’s Mod.
However, because the Skyrim game has objectives, the modifications available on Steam include “cheats” and other mods that affect how the player accomplishes the game’s objectives. Some of these modifications may profoundly affect gameplay, but have a negligible impact on the overall appearance of the game.

Other mods change the game in interesting ways. For instance Figure 31 shows a legendary axe that normally cannot be used by a player because it is stuck in a stone. The modification allows the player to use the axe as a weapon.

**Sampling Method**

A member of the research team obtained a systematic sample of 93 of the most recent 3000 mods uploaded to the Steam Workshop for Skyrim during a weekday afternoon in 2013.

**Copyright Implications**

While 19% of the modifications were recognized as referential to places and characters from the Skyrim game itself, very few were recognized as referential to works outside of the game. Only three percent of the mods were noted as potentially raising copyright concerns: a cloak modeled after the cloak worn by a character in another video game (Assassin’s creed); a set of weapons ostensibly modeled after those in a series of books (Dragonlance); and a set of “Gondor” armor (Lord of the Rings). However, none of these items was found to be similar to the referenced work.

**Other IP Issues**

The only notable trademark issues concerns Dragonlance, Gondor, and Assassin’s Creed, as noted above. No items raised noticeable issues of publicity rights or indecency.

**Notes on Skyrim and Garry’s Mod**

Because Skyrim and Garry’s Mod were among the last game populations we studied, we did not have time to do a closer analysis of their characteristics and the popularity of referential and non-referential game modifications. However, the relatively low level of referential practice, particularly in the case of Skyrim, is quite interesting. While we noted numerous Skyrim mods that make reference to other works, it seems that most UGC creators prefer to work within the fiction of the world. Perhaps this is a very strong version of the “Grox effect” observed with
respect to Spore Adventures, where the majority of the creative community of the game prefers to work within the confines of the game’s fictional universe. Perhaps it is also due to the functional nature of Skyrim mods – it may be that more players are interested in changing the rules of the game than are interested in incorporating potentially incongruent material into the Skyrim universe.

28. Warcraft Machinima

As noted above with respect to Garry’s Mod, many video games today are used for “machinima,” which is essentially the use of video game graphical engines to create narrative video. Online UGC videos exist for almost all video games today, including “walkthrough” videos that instruct players on how to overcome particular obstacles, “Let’s Play” videos that allow audiences to see a game being played (accompanied by the player’s narration), gameplay footage posted by particularly skillful players competing at multi-player games, and machinima works. Minecraft and Garry’s Mod, two games mentioned previously, are often used for machinima creations. Related UGC practices include amateur anime music video (AMV), as described by Ito (2010) and fanvids as discussed by Trombley (2007).

While we had initially hoped to conduct a random sample of YouTube machinima, we were thwarted by both technical and theoretical problems. It was difficult for the research team to obtain an accurate sense of YouTube’s total population of machinima videos by using the YouTube user interface. Not all machinima was labeled as such and some results for

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“machinima” were not machinima. Also, the research team suspected that the algorithms behind YouTube’s search results were not providing reliable data.

While we might have overcome these problems with more time and resources, we ultimately decided to focus on a site that aggregates videos related to Blizzard’s World of Warcraft, a popular massively-multiplayer role-playing game (Bainbridge, 2010; Nardi, 2010). According to the WHOIS database, a company based in Sweden owns the website, which features not only machinima, but also live video of real time game play from various players. A range of social software affordances are found on the Warcraft Movies site: users can “like” or “support” particular videos, can comment on them, and can contact their creators.

Site Rules

The site forbids uploading videos that infringe on the intellectual property rights of others. The site attempts to comply with the DMCA by listing an email address where copyright holders can provide notice to the site of infringing content. Videos can also be “corrected” by viewers, which seems to be euphemism for reporting content thought inappropriate.

Sampling Method

A member of the research team obtained a systematic sample of 84 of the most recent 5,400 videos uploaded to the site during a weekday afternoon in 2013. Within the sample set of 84 videos, 78 unique authors were identified.

Copyright Implications

All the machinima videos borrowed copyright-protected content from the World of Warcraft game. Notably, to the extent these are not commercialized by a platform, their production would seem to be within the scope of Blizzard’s broad license under its “video policy,” which currently states:

Blizzard Entertainment strongly supports the efforts of its community members who produce community videos (referred to hereafter as a "Production") using video images, footage, music, sounds, speech, or other assets from Blizzard’s copyrighted products ("Blizzard Content"), subject to a few conditions...
First and foremost, note that except as specifically provided herein, Blizzard Entertainment requires that the use of Blizzard Content must be limited to non-commercial purposes.

However, even with the Warcraft copyright issues excluded, the majority of the videos on the site raised copyright concerns. Overall, 76% of the works were identified as referential to copyright-protected works, with a subset of 60% of the sample similar to the copyright-protected work. While there were some instances of visual borrowing, the substantial majority of copyright issues were triggered by the use of music. There seemed to be a common practice in the machinima videos sampled of including popular songs as background tracks for the animation. More than half of the videos sampled engaged in this practice.

Only one video was thought to be a clear example of transformation, a video that was deemed to be a transformation of the song “I've been everywhere” (made famous by Johnny Cash and Hank Snow) applied to the context of World of Warcraft. The song used the melody and some lyrics from the original, but modified the song to refer to the setting of World of Warcraft. (Notably, other “fan” versions of the song have been done for other geographic locations). Other videos might have supported similar transformation arguments, as many videos were humorous in nature and played off the lyrics of the songs they used. However, the researching coding for transformation did not think these were clear instances of parody or critical commentary on the songs in question.

**Popularity and Referential Works**

Among other metadata, Warcraft Movies tracks the number of times a particular machinima video has been viewed. Utilizing the Mann-Whitney U, we found no significant correlation between the number of times a particular work was viewed and whether the work was deemed referential. (In this case, this primarily had to do with whether the work included a recognized song as a soundtrack.) As can be seen in Figure 32, we found a standard positive skew in the distribution of views. While one video had over 200,000 views, the mean views for referential and non-referential machinima on the site was essentially the same: roughly 14,000 views.

**Other IP Issues**

About 7% of the sampled works contained recognized trademarks. None of the works contained recognized images of celebrities. Two works in the sample set raised concerns about
Notes on Warcraft Machinima

Arguably, the most salient copyright issue with respect to the Warcraft machinima was its use of visual artwork, animation, and audio from the World of Warcraft game. Without Blizzard’s video policy, all of the videos in the sample set would have raised significant copyright questions.

However, even excluding questions about Warcraft’s intellectual properties, the number of copyright issues presented by the Warcraft machinima sample exceeded what we found with respect to Spore Adventures and other forms of “map” or “scenario” UGC. The density of the creative medium apparently increased the potential copyright issues presented. However, a substantial factor influencing our analysis was the common use by the UGC creators of copyright-protected music. Without this factor, the copyright issues raised may have been substantially lower. Also, given the narrative framework of the video and the potential for “remix” forms of creativity, the possibilities of transformation seemed stronger with respect to the videos—just as they did with respect to the other more narrative and dense forms of UGC.

29. Harry Potter Fan Fiction (MuggleNet)

Our last set of samples focused on fan fiction UGC, and particularly on fan fiction set within the world of J.K. Rowling’s Harry Potter books. Fan fiction has been discussed extensively in
the legal literature on UGC (e.g. Tushnet, 1997, 2007) and is also discussed in the general
literature on fan practices (e.g. Jenkins, 1992, 2006). Fan fiction raises significant copyright
issues, given that many courts have found copyright law to afford authors the exclusive right to
make “sequels” of books involving their characters. Most intellectual property lawyers generally
assume, probably correctly, that it would be an infringement of copyright law for a person to
make and sell (without the permission of J.K. Rowling) a new Harry Potter book, set after the
events of the seventh and final book, The Deathly Hallows. Yet there are many sites that contain
thousands of Harry Potter stories written by Harry Potter fans. One site we sampled,
fanfiction.net, claims to host over 500,000 fictional works based on the Harry Potter world and
characters.

While some legal academics have argued that Harry Potter fan fiction should be viewed as fair
use, there are few cases that would seem to mandate that conclusion. Given this, our approach
to analyzing the fan fiction samples bracketed the question of whether the fan fiction raised
copyright issues. Though we were tempted to code for works that were parodies or that
somehow altered the meaning of Harry Potter, we doubted that there would or should be a clear
dividing line between infringing and non-infringing fan fiction practices.

Rather than focusing our inquiry on copyright issues, we coded primarily for other
characteristics of the fan fiction works, such as whether they featured the main characters of
Rowling’s novels, their format, and their narrative viewpoint.

Harry Potter Fan Fiction on MuggleNet

MuggleNet is a Harry Potter fansite first launched in 2005 and based in the United States. The
site states that its founder and owner is Emerson Spartz, who started the site when he was
twelve years old. The site apparently has benefited from a friendly relationship with J.K.
Rowling, who met with Spartz in 2005 and provided an interview that was posted on the site.
Spartz has since graduated from college and the site lists a management and staff of over thirty
people, many of whom are listed as interns. The site features news and information about the
Harry Potter universe, as well as fan fiction and fan artwork. As of the time of sampling, there
were roughly 10,000 Harry Potter fan fiction works on the site, divided primarily into two
categories: general and romance fictions.

Site Rules

MuggleNet lacks a standard “terms of use” page and it says fairly little about copyright issues. In
the “privacy policy,” the site states: “MuggleNet is the sole owner of all content on this site
(excluding all copyrighted material).” With respect to submission of fan fiction, the site states:
“Don't plagiarize (steal/copy) someone else's work! Any time you use someone else's words,
including JKR's, it must be cited!” The site also prohibits various forms of fictions including
sexually explicit works, bestiality, and “crossovers” (stories mashing up two different fictional
worlds).
The range of social software affordances on MuggleNet was slightly less than what was found on the other sites surveyed. It is possible to post comments and reviews on MuggleNet of particular fan fictions, for instance, but there seemed to be no way to easily flag stories that violated policies. This may be due to the fact that, according to the site, all stories are held for moderation prior to posting, and there appears to be just one moderator who performs that function.

Sampling Method

During a weekday afternoon in 2013, a member of the research team obtained a systematic random sample of 100 of the 2,000 most recent stories uploaded to MuggleNet in all categories.

Sample Characteristics

Within the sample set, only 72 unique authors were identified, making it probable that fewer than 300 authors were uploading stories to the total population during the time period sampled. 13% of the fictions took the form of poetry. 28% were sequels (stories taking place after the seventh book). Only 26% of the stories entailed dialogue by Harry, Ron, or Hermione (the three main characters of the books and films). Only 19% involved spoken dialogue by Harry Potter. 43% of the fan fictions featured a female character as the protagonist or central figure of the narrative.

IP Issues

As noted above, we chose not to code the stories for copyright infringement. No issues concerning trademarks (other than the Harry Potter marks) or rights of publicity were found in the sample set. About eleven of the stories were noted as having sexual content and some of these used explicit language. While this sort of sexual content was certainly out of keeping with the canonical Harry Potter stories, the majority of writing was certainly less explicit than D.H. Lawrence’s Lady Chatterley’s Lover.

Popularity and Characteristics

MuggleNet tracks the number of times a particular work of fan fiction has been read. As is shown in Figure 33, the distribution of “reads” shows the same sort of power law skew that characterizes other forms of UGC discussed above. A small number of “hits” are very popularity works, while a many other works form a long tail of low popularity. The most popular work in our sample set was a small novel of over 40,000 words that had been read.

Figure 33: MuggleNet reads
over 90,000 times. It was a prequel that featured James and Lily Potter vacationing at a Muggle ski resort. Even the least popular work in the set, however, had been read sixty times. The mean number of reads per story was 4,518.

Given our data on the nature of the stories, we decided to examine whether Harry Potter fan fiction UGC consumption suggested that fan fiction meets a demand for conventional sequels (e.g. more stories featuring the main character taking place after the most recent books) or whether it meets a demand for alternative authorial approaches—e.g. investigations of different characters with different perspectives.

**Poetry:** Utilizing the Mann-Whitney U, we found that Harry Potter poetry was significantly (and strikingly) less popular than Harry Potter fiction (p=0.00). The mean number of reads for poetry was 433 whereas the mean for stories was 5,127.

**Harry speaking:** We found that spoken dialogue by Harry Potter correlated with a higher number of reads (p=0.00). The mean number of reads for stories featuring Harry was 9,579, whereas the mean for stories without Harry was 3,330. Because no works of poetry featured Harry Potter dialogue, we tested the set again and excluded poetry from our analysis—we still found a statistically significant correlation favoring Harry Potter dialogue.

**Ron and/or Hermione speaking:** We found a similar strong correlation in stories featuring spoken dialogue of Ron and/or Hermione (p=0.00). The mean number of reads for stories featuring Ron and Hermione was 10,002, whereas the mean for stories without Ron and Hermione was 3,231. Again, because no works of poetry featured Ron or Hermione speaking, we excluded poetry from our analysis and still found a statistically significant correlation favoring stories where the two characters spoke.

**Sequels:** We found that sequels were significantly (at least slightly) more popular than non-sequels (p=0.035). The mean number of reads for sequels was 5,558 whereas the mean for stories was 4,113.

**Female Perspective:** We found that stories featuring a female protagonist were not significantly more or less likely to be popular (p=0.419).

**Sexually explicit content:** We found that stories noted as featuring sexual content were not significantly more or less likely to be popular (p=0.381). The mean for sexually explicit stories was slightly lower than the mean for other stories.
Fanfiction.net (“FFN”) is a general fan fiction archive that was created in 1998 and is now the largest online collection of fan fiction. The site is graphically plain and sparse, but it is rapidly approaching a total of 10 million fan fiction stories hosted. The domain is hosted in the United States and was reportedly created by Xing Li, a computer programmer in California. The site does not list a physical contact address for the owner.

FFN has a basic set of social software affordances. Users can follow specific authors, mark stories and authors as favorites, share stories on social networks like Twitter and Facebook, and leave “reviews” of stories. Stories exist in a variety of languages.

**Site Rules**

The terms of service of FFN are extensive and prohibit users from uploading infringing content to the site. Automated tools are provided to flag content as infringing. The site makes an attempt to comply with the DMCA’s provisions, explaining how takedown notices should be sent to the site and what information they must contain. Notably, the site’s “content guidelines” indicate that the owners have (presumably) agreed to exclude certain fan fiction from the site. The guidelines state that:

FanFiction respects the expressed wishes of the following authors/publishers and will not archive entries based on their work:
As with many of the other sites discussed, UGC creators on FFN regularly discuss copyright issues in the forums of the site. Forum conversations indicate that some authors consider fan fiction a form of fair use, yet as Tushnet (2007) has noted, many authors post short and legally curious “disclaimers” of copyright ownership on their stories. (One story in a FFN sample set began with the statement: “Disclaimer: I do not own Harry Potter.”) Other authors publicly acknowledged that their work likely infringes Rowling’s copyright.

FFN uses a rating system for its content that is loosely based off the MPAA rating scheme. Apparently the site excludes “adults only” content from its archives. Members can “report abuse,” with respect to a story, which, according to the site, includes “spamming, submission of content against site guidelines, etc.”

Over 500,000 works of Harry Potter fan fiction are included in the “Books>>Harry Potter” category of FFN. During a weekday afternoon in 2013, a member of the research team obtained a systematic sample of 100 of the most recent 2,000 works uploaded to the “Books>>Harry Potter” category. The publication dates of stories within the population spanned roughly a month, suggesting that the rate of Harry Potter contributions to the site may have diminished somewhat from a prior time.

Sample Characteristics

Within the sample set, all authors were unique. This suggests that over 5,000 users were probably contributing fiction to the sample set.

The characteristics of the stories on FFN were slightly different, with more of an emphasis on the three main characters in the books. Although poetry was present in some of the fiction and several stories bordered on free verse, none of the stories were exclusively formal poetry (versus 13% on MuggleNet). 23% were sequels (versus 28% on MuggleNet). 61% of the stories entailed dialogue by Harry, Ron, or Hermione (versus 26% on MuggleNet). 40% involved spoken dialogue by Harry Potter (versus 19% on MuggleNet). 49% of the fan fictions featured a female character as the protagonist or central figure of the narrative (versus 43% on MuggleNet).

IP Issues

Again, we chose not to code the samples for copyright infringement. As with MuggleNet, no issues concerning trademarks (other than the Harry Potter marks) or rights of publicity were found in the sample set. However, 23% of the stories were noted as having sexual content and some of these stories used explicit language. Some of these stories, unlike the somewhat tamer stories on MuggleNet, were at least as graphic as D.H. Lawrence’s Lady Chatterly’s Lover.
Popularity and Characteristics

Unlike MuggleNet, FFN does not track the number of times a particular work of fan fiction has been read. However, it does track the number of times a work has been “fav’d” or marked as a favorite story by users of the site. It also tracks the number of comments on a work and the number of times it has been “followed.”

Using “favorites” as a metric for popularity, Figure 34 shows a familiar skew in popularity across the recent story sample set, which is roughly comparable to the skew in “reads” of the MuggleNet stories shown in Figure 33. A handful of popular stories dominate the catalog, followed by a long tail of less popular works.

The most popular story in the FFN sample, with 173 favorites, was “Harry Potter and the Four Horsemen,” in which Harry Potter and three of his friends magically become the four horsemen of the Apocalypse. The story was also the site of a lively discussion among the community, with 394 comments on the story posted at the time of sampling. To compare with MuggleNet, we decided to examine what the favoriting practices suggested about community interest in various types of stories.

**Harry speaking:** Utilizing the Mann-Whitney U, we found that spoken dialogue by Harry Potter correlated with a higher number of favorites (p=.040). The mean number of favorites for stories featuring Harry was 13 whereas the mean for stories without Harry was 5.

**Ron and/or Hermione speaking:** Stories about Ron and Hermione also seemed to be slightly more popular. The mean number of favorite for stories featuring Ron and Hermione was 11 whereas the mean for stories without Ron and Hermione was 5. However, the sample fell slightly short of statistical significance (p=.078).

**Sequels:** Sequels also fell slightly short of being significantly more popular than non-sequels (p=.117). The mean number of favorites for sequels was slightly higher than for non-sequels.

**Female Perspective:** Congruent with MuggleNet, we found that stories featuring a female protagonist were not significantly more or less likely to be popular (P=.821).

**Sexually explicit content:** Utilizing the Mann-Whitney U, we found that stories noted as featuring sexual content were not significantly more or less likely to be popular (p=.808). On FFN, as opposed to MuggleNet, the mean number of favorites for sexually explicit stories was higher, with 16 favorites compared to 6 for non-explicit stories.
Surveys

The Player Survey

Our survey of players received 411 complete responses.

The following demographic data was collected:

- As shown in Figure 1, the mean age of respondents was 30 years, with a standard deviation of roughly 9 years.
- As shown in Figure 2, average playing time for respondents was roughly 17 hours per week, with a standard deviation of roughly 14 hours.
- Approximately 88% of respondents were male and 12% were female.
- 31% of respondents had completed high school or technical school, 38% had completed college, and 30% had obtained a graduate degree.

Respondents used a variety of gaming platforms:

- 87% used the PC platform
- 63% used mobile platforms
- 42% used a Microsoft Xbox console
- 40% used the Sony PlayStation
- 35% used a Nintendo Wii

Most respondents preferred to play games on the PC:

- 63% preferred the PC platform
- 13% preferred the Xbox
- 9% preferred the PlayStation
8% preferred mobile games
4% preferred the Wii
4% preferred some other platform

Respondents gave a range of reasons for their platform preferences.

- Respondent who preferred the PC had a range of reasons, but common themes were the PC’s “openness” and “flexibility,” the access to mods and customized content (including Steam games), better (keyboard and mouse) control during gameplay, and access to a wider variety of content, including independent games.
- Respondents who preferred the Xbox stated that it had the best variety of games, that it worked well with their television or home theater, that their friends had the system, and that they preferred the Xbox controller.
- Respondents who preferred the Wii generally liked Nintendo games and some preferred its simplicity compared to other systems.
- Respondents who preferred the PlayStation said they liked the game library, had grown accustomed to the PlayStation, and some stated they preferred it to the Xbox because it felt more friendly to consumers.
- Respondent who preferred mobile games praised their comparatively lower prices, their convenience, and the ability to play quickly for brief periods of time.

We asked the respondents how many had played some of the games we had surveyed:

- 59% had played The Sims 3 or another Sims game
- 56% had played Minecraft
- 37% had played Little Big Planet
- 36% had played Spore
- 24% had played Second Life
- 23% had played Garry’s Mod

We asked the respondents what genres of games they enjoyed playing:

- 89% liked to play action, arcade, adventure, and fantasy games
- 64% liked strategy games
- 49% liked first person shooters
- 49% liked massively-multipayer games
- 37% liked puzzle or casual games
- 37% liked simulation games
- 22% liked racing and/or sports games

We asked the respondents if they had ever shared content online and 75% stated that they had. We then asked respondents that had shared content online if they had used some of the more popular UGC sites. Of the 75% who had shared content:

- 81% had uploaded a video to YouTube
- 27% had posted artwork to DeviantArt
• 25% had posted to Reddit
• 23% had uploaded content to Tumblr
• 17% had uploaded a photo to Flickr
• 6% had pinned content on Pinterest

We asked respondents that had shared content online: “What motivates you to share content that you create online?” and provided them with a set of potential responses.

• 73% chose “I enjoy being creative”
• 63% chose “I want to amuse my friends and others”
• 50% chose “I enjoy being part of a creative community”
• 48% chose “I want to demonstrate my skills and talents”
• 41% chose “It gives me valuable experience”
• 16% chose “I hope to make money”
• 16% of respondents included other motivations, including:
  • “Keep track of my thoughts easily.”
  • “I simply need it.”
  • “Show family videos of my kids.”
  • “I am a musician and that is how I release my music these days.”
  • “Feedback, opinions, and critiques.”
  • “I put videos on YouTube and link videos to products I sell on ebay.”
  • “Part of my job”
  • “bored”
  • “Relevant to specific projects...”
  • “I like to create communities and foster them into something meaningful.”
  • “I love creating stuff that has never been created before”
  • “I like the recognition and praise I get from my peers whenever I make something really great.”
  • “All of the ones I’ve checked here are minor reasons. Mostly the games, songs, and video clips (of my games) are shared only to try and get feedback.”
  • “I want to see people change, including myself, positively.”
  • “A would-be author of fiction must have a blog. Must.”
  • “School assignment”
  • “Sweet, delicious link Karma”
  • “I want to develop confidence.”

We asked the respondents if they had ever created new content related to video games and 70% stated that they had. They reported that they spent, on average, about 5 hours per week creating content related to video games.

We asked those respondents what sorts of content they had created and listed several possibilities:

• 66% had created new objects in a game
• 56% had created new maps or new scenarios
• 49% had created new avatars
• 29% had made gameplay or machinima videos
• 28% had made game mods or hacks
• 28% had authored fan fiction or fan artwork
• 27% had created new textures
• 22% had made music or sound effects
• 13% had made costumes, crafts, or other tangible objects
• 15% of those who had created game-based content had created forms of content that we did not list as options. These included:
  • “entirely new games”
  • “custom user interfaces”
  • “guides & walkthroughs”
  • “in character blog posts”
  • “Custom players/teams in sporting games”
  • “Roleplaying within an online game”
  • “an audio podcast”

We asked players who created content related to games what sorts of games they created for. Certain game genres were more likely to be used for player creative practices:
• 70% created content for or about action, arcade, adventure, or fantasy games
• 35% created content for or about strategy games
• 30% created content for or about simulation games
• 27% created content for or about MMOs
• 26% created content for or about first person shooters
• 14% created content for or about puzzle or casual games
• 10% created content for or about racing or sports games

We asked individuals who created content in or about video games where they received their inspiration for new content and offered them several options.
• 92% selected “From my imagination”
• 72% selected “From the game I am playing”
• 58% selected “From other video games”
• 55% selected “From books and films I like”
• 48% selected “From other people in my gaming community”
• 13% selected “From other sources (please specify)” These included:
  • “Youtube, forums”
  • “My experiences and opinions”
  • “Wikipedia articles”
  • “From pretty much everything”
  • “God”
  • “the entirety of the universe, the muse knows no names.”
• “Asking someone where they’re inspired is silly, it’s so hard to pin point”
• “Jane’s Defense Weekly, etc.”
• “Comics”
• “From reality. Sometimes walking around town has given great inspirations.”
• “Music”
• “Politics, current events”

We asked individuals who had created content in or about video games “Have you ever created game-related content that referenced other creative works?” The majority (57%) stated they had not. 43% (comprising 30% of all respondents) said they had. Of those:

• 83% said they had referenced other video games
• 68% said they had referenced television shows or movies
• 58% said they had referenced books (including graphic novels)
• 16% said they had referenced other works. These included
  • “Music”
  • “Web memes”
  • “Action figures (G.I. Joe, etc)”
  • “Celebrities, pop culture”
  • “Real-world military vehicles, weapons, etc.”
  • “Pen and paper RPGs”
  • “Fan works (art, fiction, mods)”

We asked those who had created new content in or about video games whether they had shared that content with others. 77% of those who had created game-related content said that they had. This represented approximately 54% of the total survey respondents.

We then asked those 54% if they had shared content online. 89% said that they had shared game-related content online. This represented 48% of the total survey respondents. Of that number:

• 43% had shared new maps or scenarios (21% of all respondents)
• 36% had shared objects (18% of all respondents)
• 35% had shared videos (17% of all respondents)
• 30% had shared custom avatars (15% of all respondents)
• 29% had shared game modifications (14% of all respondents)
• 26% had shared fan fiction or artwork (13% of all respondents)
• 19% had shared my new textures (9% of all respondents)
• 19% had shared crafts and costumes (9% of all respondents)
• 13% had shared new music or sounds (6% of all respondents)
• 17% (8% of all respondents) had shared other original game-related content. These included:
  • “Blog posts”
  • “Reviews”
We asked those who had shared content online if they had shared content related to some of the games we had surveyed for the project.

• 61% had shared content related to Minecraft  
• 22% had shared content related to Little Big Planet  
• 20% had shared content related to Spore  
• 17% had shared content related to The Sims  
• 14% had shared content related to Second Life  
• 13% had shared content related to Garry’s Mod

We then asked if respondents had ever downloaded player-created content for the games they played. 96% of respondents said they had downloaded player created content. (It was notable that whereas only about half of all respondents (48%) had created and shared game-related content online with others, almost all had downloaded player-created content.)

We asked those respondents who had downloaded content is they had downloaded content related to the games that we had surveyed:

• 63% had downloaded content related to Minecraft  
• 34% had downloaded content related to The Sims  
• 30% had downloaded content related to Little Big Planet  
• 24% had downloaded content related to Garry’s Mod  
• 20% had downloaded content related to Spore  
• 17% had downloaded content related to Second Life

We next asked those who had downloaded content what sorts of content they had downloaded:

• 71% had downloaded player-created maps or scenarios  
• 70% had downloaded player-created mods or hacks  
• 61% had downloaded player-created in-game objects  
• 59% had downloaded player-created textures  
• 58% had downloaded player-created videos or machinima  
• 55% had downloaded player-created avatars or characters  
• 44% had downloaded player-created fan fiction or fan artwork  
• 43% had downloaded player-created music or sound effects
• 7% had downloaded other player-created content, including:
  • “Walkthroughs, videos, guides”
  • “filk (fan music)”
  • “Costume patterns and prop blueprints”
  • “Let’s Play videos.”
  • “Total Conversions”

We asked those who had downloaded player-created content: “Have you ever downloaded or viewed player-created content that referenced books, films, or other popular works?” 79% of those who had downloaded player-created content (76% of the total population) said they had done so.

We asked those respondents who had downloaded player-created content if they preferred content that referenced books, films, or other popular works. Two-thirds (67%) said they did not. (This was curious, given the results of our platform samples.) One-third (33%) said they did prefer referential player-created content.

Our last three questions to respondents concerned the importance of UGC tools to their enjoyment of games, the importance of UGC access to their enjoyment of games, and the importance of UGC affordances to purchasing a game.
The first question was: “On a scale of 1-5, how important are creative tools to your enjoyment of a game? (1 = creative tools are not important, 5 = creative tools are extremely important).” The results of this question are displayed in Figure 3. The section coloring in the chart corresponds to gaming platform preference.

The second question was: “On a scale of 1-5, how important to your enjoyment of a game is your ability to access the creativity of other players? (For example, to obtain levels, skins, or mods designed by other players).” The results of this question are displayed in Figure 4.

The third question was: “On a scale of 1-5, how important is shared player-created content to your decision to purchase a game?” The results of this question are displayed in Figure 5.

As the color coding on the charts displays, those preferring the PC platform were more likely to value UGC with respect to all three questions.
The four charts in Figure 6 display correlations between game-related creativity and other variables in the survey data. As shown at the upper left, respondents who preferred to play on the PC and the Wii recorded higher levels of game-related creativity than those who preferred the Xbox and PlayStation. Fewer than half of players who preferred the Xbox reported creating new content in or about games. As shown at the upper right and lower left, a respondent’s level of formal education and age did not seem to significantly correlate with the creation of game-related content. As shown at the lower right, respondents who reported playing more hours per week were more likely to have created game content.

Figure 6: Correlations with reported game-related creativity
The four charts in Figure 7 display correlations between several motivations for sharing game-related creativity and demographics factors, displayed as a percentage of the demographic segment that shared game-related UGC and selected that motivation. As shown at the upper left, higher levels of education correlated with less of an interest in making money by sharing game-related content. As shown at top right, older players were less likely to create because they were interested in gaining experience. As shown at lower left, older players were also less likely to be motivated by displaying skill. As shown at lower left, the motivation of community participation seemed higher for both the younger and older demographics. Our results with respect to motivation were largely congruent with surveys of UGC motivation previously conducted by Sotamaa (2010) and Poor (2013).

Figure 7: Correlation of age/education with motivation
The four charts in Figure 8 display correlations between respondent age and UGC-related practices, displayed as a percentage of specific age groups. As shown at the upper left, all age groups reported roughly similar general levels of game-related creativity. However, as shown at top right, younger players more often preferred console platforms—the Wii having its highest popularity with the youngest group and the Xbox being most popular with the 35-44 age group. As shown in the bottom two charts, the popularity of particular UGC-related games seemed to rise or fall with specific age brackets. As shown at lower left, older players were more likely to have played Second Life. As shown at lower right, they were less likely to have played The Sims.
The Industry Survey

Via the game industry website Gamasutra and the informal contacts of our research team, we advertised a survey targeted at professionals working in the video game industry. Respondents were asked a screening question to determine if they were professionally employed in the video game industry. Only those who responded positively were surveyed. No compensation was provided for completing the survey. Forty-six surveys were completed.

The following demographic data was collected from the 46 respondents:

- **85%** of respondents were male and **15%** were female (this may have reflected the significant gender disparity in the video game industry);
- The median age of respondents was **40** years old (compared to **30** for the player survey).
- **79%** of respondents had completed a college degree, with **22%** having obtained a graduate degree. (This was a different educational demographic than we obtained in the player survey, where **31%** of respondents had not completed college).
- **98%** of respondents had familiarity with copyright law, with a subset of **24%** claiming “a pretty good understanding” and a separate subset of **17%** claiming “substantial expertise.”
- **20%** of respondents were independent (solo) game industry professionals, **20%** worked for small companies with 2-15 employees, **24%** worked for mid-size companies with 16-100 employees, and **37%** worked for large companies with over 100 employees.
- Respondents worked in a variety of fields within the game industry. **57%** were involved in game development (including business and management), **7%** were lawyers in the industry, **15%** reported a job title such as “engineer” that emphasized technical skills, and **11%** reported they were video game artists.
- Respondents had worked on a variety of game genres. The most common genre was action/adventure games (**58%**) and the least common was racing or sports games (**18%**).
We asked respondents if they had ever created content for video games before becoming a professional in the industry:

- 61% had created maps or scenarios
- 55% had created objects in “sandbox” games
- 45% had created gameplay mods
- 36% had created fan fiction or artwork
- 27% had created avatars/skins
- 24% had created game-related videos or machinima
- 21% had created crafts or other tangible objects
- 12% had created music or sound effects

We asked respondents what percentage of video game players they thought created new content in or about video games:

- 62% said that 0% - 20% of players created new content
- 27% said that 21% - 40% of players created new content
- 4% said that 41% - 60% of players created new content
- 7% said that 61% - 80% of players created new content
  o (Note: if our player survey was not biased, this was the correct answer: 70% of our player survey respondents said they had created new content)
- None said that 81% - 100% of players created new content

We asked respondents what percentage of video game players they thought were “capable of creating ECONOMICALLY VALUABLE content in or about games”:

- 13% said less than 1% of players were capable of creating valuable content
- 56% said 1% - 5% of players were capable of creating valuable content
- 16% said 5% - 20% of players were capable of creating valuable content
- 13% said 20% - 50% of players were capable of creating valuable content
- None said 50% - 90% of players were capable of creating valuable content
- 2% said 100% of players were capable of creating valuable content

We asked respondents what they considered the average quality of player-created content:

- 9% said that the average quality was “Terrible”
- 36% said that the average quality was “Poor”
- 47% said that the average quality was “Fair”
- 9% said that the average quality was “Good”
- No respondent said that the average quality was “Excellent”

We asked respondents: “In what sorts of games do you think player-created content is generally a desirable feature? (Please check all that apply)”

- 78% said UGC was desirable in massively-multiplayer games
- 78% said UGC was desirable in simulation games
• 69% said UGC was desirable in action, adventure, and fantasy games
• 67% said UGC was desirable in strategy games
• 56% said UGC was desirable in first person shooters
• 40% said UGC was desirable in puzzle or casual games
• 36% said UGC was desirable in racing and sports games

We asked the respondents if they agreed with the following statements about UGC and games:

• 75% agreed that “UGC is a feature that is very hard to design well.”
• 70% agreed that “UGC is a trend that is increasing in industry popularity”
• 36% agreed that “UGC tools are a feature that only makes sense in a limited number of game genres.”
• 25% agreed that “UGC is appealing only to a minority of gamers.”
• 7% agreed that “UGC is a trend that peaked and is now fading”

We asked the respondents what they believed were the motivations of players creating content:

• 95% said players create because they enjoy being creative
• 93% said players create because they enjoy including their own content in the game
• 82% said players created because they enjoy being part of a creative community
• 80% said players create because they enjoy another way of interacting with the game
• 77% said players create because they want to demonstrate their skills and talents
• 66% said players create because they want to amuse their friends
• 55% said players create because they hope to make money
• 43% said players create because it gives them experience in game development

We asked respondents if they knew anyone in the game industry who had been hired because of the content they had created before being professionally employed. 75% said they knew someone who had been hired because of the content they created. 25% said they did not.

We asked respondents: “On a scale of 1-5, how important do you think creative tools are to a player’s enjoyment of a game? (1 = creative tools are not important, 5 = creative tool are extremely important).” The results are displayed in Figure 10, top left, and displayed alongside our survey results asking the same question to players. Industry respondents generally believed UGC tools were less important to player enjoyment of games, where as players generally believe UGC tools were more important to their enjoyment of games.

We asked respondents: “On a scale of 1-5, how important do you think shared player-created content is to a gamer’s decision to purchase a game?” The results are displayed in Figure 10,
bottom, and displayed alongside our survey results asking the same question to players. Again, industry respondents believed that UGC was less important to player purchasing decisions than our player survey reported.

Figure 10
Narrative Responses

The Industry Survey posed the following optional question:

“What new challenges do you think player-created content presents to game developers?”

28 of the 46 respondents answered. The responses were varied and no particular theme was dominant, but certainly common concerns about UGC in the video game context could be identified, as explained below.

21% of those responding were concerned about how UGC could alter the balance of the game and enable forms of hacking and cheating:

- “Most UGC breaks the original game in some way… [P]oor balance…”
- “Hacking / cheating.”
- “[Modding] tools can significantly unbalance a game or create other, unintended side effects that directly impact gameplay.”
- “It easily opens a game up to cheating. It creates new ways for the game to break and increases support and development effort.”
- “…where some of the users are inexperienced, mischievous or even malevolent, it’s even harder to ensure that the content they create does not have a negative impact on the game.”

25% of those responding were concerned about low quality content and UGC “curation”—i.e. prioritizing the best examples and de-prioritizing the worst:

- “Curation is the single most important challenge to player-created content these days…. Ensuring that only the highest quality content is available is key.”
- “Does this player-made content offer something I want and is it any good?… [Y]ou may end up with a flood of content, much of which may be very similar… Most UGC…[d]oesn’t fit the game’s visual style, poor balance, inappropriate, you name it.
- “Rating/gating content so that players avoid being exposed to excessive quantities of inferior creations … wading through crap to find a single enjoyable experience.”
- “The biggest challenge for developers that UGC brings is that of curation. Players making awesome content can help a game immensely in a number of ways, but players making crappy content can have the exact opposite effect. Developers need to be mindful of how they curate UGC such that they aren’t terribly restrictive, but only highlight quality UGC.”

29% of those responding expressed some concern about how intellectual property laws related to UGC creation:

- “Mostly IP…”
- “Filtering out the… anime ripoffs, the skins stolen from another game…”
- “Copyright law”
It was notable that most narrative responses concerning IP were fairly perfunctory compared to other concerns expressed. Several respondents acknowledged problems with copyright law, but the issue was not discussed in detail—at least not in response to this first question.

32% of those responding expressed concerns about inappropriate and indecent content:

- “the My Little Pony porn mods...”
- “Age restrictions...”
- “How do you respond to your community when you feel something is inappropriate?”
- “inappropriate content created by players”
- “Rating systems... fear by publishers”

36% of those responding explained that a major problem was determining how to construct the tools that would enable various forms of UGC:

- “How easy is it to do?... If it's too hard, you end up with only the super fans doing it, maybe higher quality overall, but very low numbers.”
- “Tools and continued support for them.”
- “The skills necessary to create content creation tools are largely orthogonal to those needed to create interesting content and gameplay, necessitating different developers.... Powerful content creation tools can be tedious to use for the novice.... Alternatively, simpler tools can help new users create content, but the quality of that content will be low thus making the overall game less attractive.”
- “Providing tools for allowing the creator to see / test how difficult the level or content they're making is very important and hasn't been addressed a lot...”
- “Tools programmers have to simplify any toolsets so that out-of-house developers can more easily create content.”
- “[G]ame developers have to ponder on whether they want to enable players to use modular parts and tools to create their UGC..., to give them continuously variable tools... or to have them have access to developer’s tools.... While the latter would enable players to generate content outside of the perceived and expected control of developers, the first to possibilities would need inherently different balancing measures.... The release of developer's tools is completely unimportant for normal players and will only attract modders with the time and effort to learn the usage of the tool...”
- “If games become more about UGC than the actual story or mechanics made by professional designers, then studios focus more on making 'tools' than making game 'content.'”
Finally, 36% of respondents expressed concern about how UGC challenged the flow and enjoyment of game play, including the motivations of game players and game developers. These comments were related to the previous comments about designing games as opposed to designing tools. Providing UGC affordances and integrating them into enjoyable games was seen as a significant design challenge:

- “Why should the player create anything? In order to get a lot of people to do it, there need to be some compelling reasons... Why should anyone else care that some player made something?... It's a huge challenge to relinquish some of your authorial power and let the players play as developers.”
- “Creating powerful content creation tools is difficult enough as a standalone product, but the difficulty is amplified significantly as you try to integrate them into the gameplay.”
- “It may somewhat clash with [downloadable content] or microtransactions. If you offer something that could be done through user-generated content, most likely players will not be happy about it. One has to be very careful regarding this, especially on [free-to-play games].”
- “Developers must design for UGC from the core of the player experience- and not as a feature add-on.”
- “Game developers... must find a balance between what players want to create and what they would need to create to advance (e.g. does a player in Spore have to use feathered wings instead of leather wings simply because they possess better values, even if the player wanted to create a dinosaur creature).”

**Intellectual Property**

The next question specifically asked the respondents to address the question of intellectual property:

“Do you think player-created content raises significant intellectual property issues for game companies?”

The question was noted as optional. Again, 28 of the 46 respondents answered.

One respondent answered simply: “No” and a total of 46% of those responding thought that the issues were either not significant, not legitimate, or that any issues might be easily avoided by technological design or contractual agreements:

- “It shouldn’t unless lawyers are stupid.”
- “Our initial risk analysis... revealed it would not be significant. This was mainly based on... common acceptance of strong... EULA’s by users..., ease of policy implementation for DMCA ‘take down notices’, precedents on ‘fair use’”
- “Isn’t the responsibility on the players? I assumed the game developers have a waiver or something like that.”
• "It depends again on the type of product, and the fine print of your agreements, and the good-will of your players... The closer you get to handing players a paintbrush and not a small set of prefabricated building blocks, the more risk I feel could be involved."
• "Significant? No. As long as game companies are cognizant of the law and provide appropriate facilities for take-down (and engineering teams do not make take-down difficult with architectural decisions) problems will be minimal."
• "I think there is a lot of fear for what 'might' happen, I don't think the issues are significant."
• "I think the IP agreement between game developers and users who generate content should be fairly straightforward, and treated similarly to a creative content authoring software (Photoshop, Maya, etc) license."

54% believed that UGC did raise significant IP issues:

• "Absolutely it creates IP issues for developers and publishers.... If you filter through any Steam Workshop page, you will see tons of assets that are ripped straight out of TV, movies, books, and other games, with zero regard for attribution or copyright."
• "Yes- a large amount of this content that I’ve seen uses the intellectual property of other games, movies, books, and TV programs. If I were a developer making such a game, I’d be worried about the potential legal back-lash of allowing copyrighted content to be associated with my game."
• "Yes. See [Second Life] for pretty much anything I might say in the matter."
• "It does. Most issues are raised when users gratuitously upload content (especially models) from rival game companies."
• "Yes, I do... 1) How do you handle players infringing obviously copyrighted material? This is the most common problem, but not the only one.... 2) How do you handle players stealing other players’ content? This is less common, but players care much more deeply about this ... 3) Does the player have any rights to the content they made for the game? ... 4) How do you create legally defensible policies for all of the above and more? .... Juicy stuff!"
• "Yes. Players often use existing IPs to inspire their own work. I can’t count the number of times content on some MMOs has been banned because of infringement issues."
• "Yes, mods can often gain more popularity than the games they were based off... as well as people making mods that infringe upon rights they don’t own - like the Lord of the Rings mods for Skyrim that had to be shut down."
• "(1) acquiring IP rights to user-created material; (2) liability for infringement of third-party IP caused by players (e.g., ripping off TV/film/other games) (3) brand damage/warranty claims for broken mods that ruin the game (4) fundamentally altering/breaking game design/gameplay (e.g., Lua scripts in [World of Warcraft])."
• "It does, has and will. Look at the City of Heroes... they had a hell of a time with people creating characters that just looked like ... super heroes! Some one made a strong guy in shorts with green skin and they were accused of stealing the Hulk..."
• "Yes. If a player creates something similar to an existing intellectual property, how do you deal with the possible legal issues. If a player steals another player’s UGC and sell it as their own, how do you verify who really owned it to begin with?"
Fair Use

We asked respondents about the fair use doctrine in the United States. 91% were aware of the doctrine. We asked those respondents if they thought fair use rights should be broaden, narrowed, or if they should remain the same. None of the respondents thought it should be narrowed. 64% thought it should be broadened, 26% said it should be narrowed, and 10% had no opinion. We then asked the respondents the following questions:

“Do you think all player-created content should be seen as a form of fair use? For instance, do you think a game player should be able to make and use in-game content not owned by the player? (E.g. a Mickey Mouse skin, a Harry Potter scenario, a Beatles chiptune soundtrack?) Why or why not? (Optional question)”

30 out of 46 respondents replied to the question.

21% of respondents stated that player-created content should amount to fair use:

- “Yes, definitely.”
- “Yes. Those things are part of the players’ culture, and putting limits on what part of their culture they can use to express themselves is limiting the range of their creative expression.”
- “Complicated, but generally yes.”
- “Yes, as long as the content was made from scratch by the player that uploaded it.”
- “Yes, for pragmatic reasons...”
- “Yes. A game with a rich construction set can be merely a medium in which a user creates...”

29% of respondents stated that player-created content should not amount to fair use—at least not categorically:

- “No - trademarked goods and music in games are like other forms of publishing.”
- “No, not without the explicit permission of the creator”
- “Absolutely not…. Copyright and trademark owners should have the right to prevent their works from being associated or used in games they don’t like. Ditto likeness rights for celebrities.”
- “Not really. I believe it should be up to the original owner of the property to decide if they want to let people use their property in such a way, as Disney might not want Mickey Mouse associated with a game that’s not very kid-friendly, for example.”
- “Not really. The problem is that it could encroach on a competing official product. For example, if there were two soccer games, one that was licensed to use the official rights to a particular league and its players, teams, liveries and venues etc. and another that wasn’t official and had ‘generic’ content. The community might produce a set of models and skins as a modification to the unofficial game.. not a great situation, really.”
- “I don’t think you can make as sweeping a change as that… I do think a copyright owner should have the ability to prevent someone from using their IP in player-created content...[T]oo broad of a fair use definition could lead to some unexpected and awful
outcomes... It may be seen that broadening fair use is expanding freedoms, hooray, but it's also shrinking the rights of IP owners.”

- "Generally no, as those characters' usage rights are owned by others. The typical person I don't think has a huge understanding of where the line between “fair use” and "infringement" lies...[I]f the copyright owner objects, that the asset be removed from the game.”
- “If all player-created content would be considered fair use, then the games that are the medium for that kind of content would inevitably be changed to a form unrecognizable from what it currently is.”

68% of respondents (including some who stated “yes” or “no” generally) attempted to draw a distinguishing line between acceptable forms of fair use and uses that were not fair. They did this in various ways.

14% of respondents noted that they believed “remix” and satire/parody works should be fair use:

- “Is it a mashup or a mix?”
- “remixing or fan work, then yes.”
- “...assuming the works have not been remixed enough to be considered new works”
- “that's probably wrong unless... it's satirical”

39% of respondents drew a distinction between fair use and infringement and felt the question of fair use centered on whether players profited from UGC:

- “Privately this is ok, if publicly he should not be able to sell it.”
- “In a game where commercial use isn't a feature of the game (like City of Heroes) I'd treat them as fair use, but in a game where they are (Second Life - selling character skins for in-game money/real money) I think they are closer to ripoff goods.”
- “Is anyone making money off of it?”
- “As long as the content is not used to make money for the creator...”
- “I see no problem with this unless the player is profiting from this kind of content.”
- “Player created content that is non-commercial and doesn’t compete with developer's own product should be considered fair use.”
- “As soon as the content creator attempts to profit from the use, it ceases to be fair.”
- “I doubt many people [are] going to be OK about somebody profiting from copyright infringement. On the other hand, fan-made content that's being distributed for free (i.e. doing it non-commercially) probably is going to be ignored...”
- “Yes if the player can’t monetize it. No if that skin generates income.”
- “Yes- but it depends on the commercial intentions of the creator for that content...”

However, 14% considered the possibility that non-commercial player creativity could be monetized by game companies:

- “Tricky... the environment requires other users to pay in order to access this content (i.e. monthly subscription to a sandbox MMO) then the question of monetary benefit is muddy. Is the publisher knowingly exploiting IP?”
• “It’s a fine line. For instance: imagine a game that is mostly driven by player-generated content. This game promotes/shares/displays the most successful pieces of content to many other players, and those top pieces are seen as an important piece of the game. In that scenario, if you have copyrighted material in those pieces of content... suddenly that copyrighted material is a primary, and important, part of adding value to the game. That’s definitely not fair to the original owner.”
• “That’s a very complex question. Even if the player doesn’t directly benefit from the used IP, the owner of the game to which it is added may benefit indirectly. (i.e., “Cool, someone made a Mickey Mouse skin for GTA9. I need to buy that game!”) I don’t think you can answer this with a yes or a no.”
• Yes and no... [I]n a multi-player online space where the use of these things could be construed as earning money for the developer, it definitely should not be allowed (unless players are using characters, etc, that belong to the IP the game is based on.)”

Moral Rights

One of the peculiar doctrinal features of United States copyright law is its lack of emphasis on the “moral rights” of the author—including the right to prevent the “mutilation” of authorial works and the right to claim authorship of works (Kwall, 2009). Such rights do not generally exist under United States law, but in European systems, the modification and misattribution of traditional authorial works can give rise to moral rights claims.

We thought it would be interesting to determine whether professional in the game industry had different opinions about game modification when it was their own work subject to modification. Video games are an interactive medium by nature, but player agency in shaping non-UGC games is generally bounded by the constraints set by the game designer (Lastowka, 2013). So we asked the following optional question:

“As a creator of game content, how do you feel about people modifying your creative works?”

35 out of 46 respondents replied to the question.

About 37% named at least some situations where they disfavored modifications of their work:

• “I would like to have the ability to decide whether or not my content can be copied and altered.”
• “Mostly not in favor except to the extent I design as an element of game play.”
• “I want my ORIGINAL works to be recognized in some way for being my original creation for that game’s storyline/lore.”
• “If I... built Minecraft and then if another developer made the same game within the same year/market and called it Craftmine- I would pursue legal action.”
• “Personally, I’m not a fan, but that is because my works are about providing a set experience for the player...”
• “[I] take offense when my game is made “better” and then provided to other people on the internet (even if only through the form of patches). I think that people who want to
create own material should do so by applying for a professional job instead of disassembling other people’s work.”

- “[I]f I am credited properly, I am generally "okay" with the idea.”
- “[O]nce they try to use our work and claim it as their own creation, and/or make fake/phishing sites, that’s when we get our lawyers involved.”
- “Since my goal is to create socially valuable simulations that are necessarily based on solid data and information, alterations would ruin the value of the simulation.”

On the other hand, roughly half (49%) were unequivocally enthusiastic about the idea:

- “The game I’m working on right now actively has support for modding, so that probably says everything.”
- “I’m happy for them to do it - if I make a sale, that’s a good thing. If I make a community that enjoy my work, I want them to stick around!”
- “I’m flattered when someone feels that what I make is worth expanding upon.”
- “Love it.”
- “Personally, I love it. If they care enough and are inspired enough to want to get in there and make it their own, well then I must have made something pretty cool.”
- “I can’t make my game perfect for everyone. But if I give my users the tools to customize it, they’ll make it perfect for themselves.”
- “two thumbs up”
- “I think it’s an important part of the whole experience of games.”
- “I love it! Love love love it. I am SO excited when I create content that players like enough to be inspired by. It makes me feel all warm and fuzzy and it tells me that I’m doing my job well. I even feel this way when my work generates forum discussion, even that with dissenting opinions.”
- “I think it’s fantastic. It shows that my work connected with users enough for them to want to put lots of time into it - crafting it, molding it, engaging with it.”
- “I don’t have any problem with this and actually welcome it.”
- “I’d love for players to modify my stuff. I’d be flattered that they care enough.”
- “Love it - it keeps the game alive and actually gives us ideas for the types of content people would like to see.”
- “I think its great!”
- “Restricting this action would greatly slow down innovation in our industry.”
- “No concern at all. If they create greater things than the original product, I would only be proud.”
- “In the past, I was very concerned with protecting my ideas like they were a secret that someone could steal and use for their own benefit. Since beginning to work in the games industry, I feel I’ve grown a bit to understand that an idea is only as good as its execution… Any instinctual response of possessiveness or guilt is harmful to the well-being of self, the team, and the project… Ideally, I think this attitude would permeate to user created content as well.”

14% thought that making a profit was all or part of the line between permissible and impermissible modding:
• “I feel like if it is not earning the person money... I am generally “okay” with the idea.”
• “If they started selling that model, I would not be okay with that.”
• “So long as they are not reselling my content, I’m fine with it.”
• “As long as they’re not making money off it or taking money away from me if the content is making me money I don’t care.”
• “I’m fine with it, so long as they do not try to benefit monetarily...”

20% expressed “moral rights” sentiments, expressing concerns about attribution, misattribution, or the integrity of their creations:

• “[I]t’s a bit violating for them to take my “baby” and do whatever they feel like with it.”
• “[I]f somebody created a model based off of a drawing that I did, and credited me, I would be okay with that.... If somebody edited a drawing or model I did, and gave me credit, it might make me uncomfortable if the main bulk of work was still my own (whether or not money was involved). I would want it to be made clear which part of the work was mine, and which part was theirs.”
• “I’m fine with it, so long as they do not... pass off the underlying foundation as their own.”
• “I am OK with people rewriting my stories as fanfiction, but the original should be made distinctive in some way. In practice, licenses can do this by requiring attribution. But attribution does not quite go far enough. There needs to be both attribution and preservation.”
• “Awesome so long as it is clear that the mod is not standard part of the game”

17% noted that modifications could improve their work and seemed pleased with this possibility:

• “I can’t make my game perfect for everyone. But if I give my users the tools to customize it, they’ll make it perfect for themselves.”
• “The fan community contributes greatly to the game genre on many occasions by redefining and adding to the body of knowledge, and making cool new forms of entertainment.”
• “My work is always ‘modded’ by my peers. Having others only adds to the creative process and opens more doors.”
• “It’s interesting to see the vision of other people being formed with your own vision as a start point and not an end. I, generally, enjoy it and try to learn with it as much as I can.”
• “There’s a lot of things we never get to do, or can’t finish; it’s good to see that someone has the time too :) Even if they take it in a different direction than you would have otherwise, it’s nice to see people continuing my work.”

Copying

Finally, because we had frequently spotted UGC that transferred characters and other content from one game to another, we asked respondents how they felt about people using their content in other games:
“As a creator of game content, how would you feel about people using your creative content in other games? (Optional)"

34 out of 46 respondents replied to the question.

18% were unequivocally enthusiastic about the reuse of their work in other games.

- “I would actively encourage this.”
- “I would openly encourage it.”
- “Bring it on! Cross promotion FTW.”
- “I think it would be flattering...”
- “I would have no issue.”

18% were not enthusiastic about the reuse of their work in other games.

- “If it worked better in other games and I lost sales because of it, I’d be pissed.”
- “[C]ompletely unacceptable. Game development is not some form of free art done solely as a hobby, but a profession people pursue to earn money. The generated content for games is exclusive to these games - re-using them for other game projects is the digitally creative counterpart to theft.”
- “This would be a little frustrating... If somebody wants to modify my work because they love it and want to go further, great. If they want to use my work to make money, less great.”
- “This I think is a problem. If the content was greatly modified then that may be acceptable, but taking content wholesale and placing it into another game is not appropriate. Companies cannot do this, and so players shouldn’t be able to do this.”

59% had mixed views about the reuse of their work in other games.

- “Mostly not in favor but it depends on the particular use.”
- “Also fine, but if they want to sell it, they should ask me!”
- “I wish that the lawyers would let us do that - Only Valve has been cool about that so far.”
- I want people to use my content in other games, but I don’t want them to do a terrible job of it.”
- “It depends on the situation. If another developer is just shamelessly copying huge swathes of our game, then I’ll be angry even if the things they’re taking (gameplay mechanics) aren’t protected by copyright. On the other hand, if they’re taking one or two small pieces from our game, as a sort of homage, I wouldn’t mind...”
- “If people want to steal systems and general ideas, go right ahead!... Now, if someone copied the ENTIRE look and feel of a system, from the UI to the assets to the way it operates, that starts to feel a bit disingenuous.”
- “This is a tricky question...”
- “My personal feelings, legality aside? That would depend largely on whether I felt like the person using my creative content was inspired by my work, or if they were just being lazy. My opinion on that matter would likely be based on how I felt about the quality of their result and their communication with me about the content.”
Conclusion

We are still processing the data we collected from both aspects of the project and will likely issue supplemental reports and papers with further analysis of the data in the future. Our survey of players, in particular, might be analyzed more thoroughly to reveal relevant correlations between specific variables. What we have presented here, however, should shed some new light on discussions of UGC and copyright law.

Highlights of the Data

We should first note that our data largely refutes the claim that UGC is simply “user posted content”—at least with respect to the specific platforms that we sampled. Our platform samples revealed a diversity of UGC practices, but notably very few items that were wholesale reproductions of copyright-protected works. It seems obvious, based on our findings, that UGC platforms should not be confused with “file sharing” platforms such as the mp3 sharing platforms at issue in the Supreme Court’s Grokster case.

Perhaps surprisingly, the majority of the UGC we surveyed did not consist of recognizably derivative creativity and did not seem to raise any issue of copyright infringement. The mean level of identified referential practices was 25% across the 28 samples where it was coded. The majority of the UGC we studied did not appear to be “derivative,” but rather “original” as those terms are used in copyright law. Players creating this form of UGC should be recognized fully as “authors” by copyright law.

“Fan” works were certainly very common, and many fan works borrowed substantially from copyright-protected works. However, most fan works were “original” in the sense that they were re-created in a new medium by the author. Many also showed evidence of substantial skill and effort on the part of the author. These fan works were generally not more likely to be popular among the general population of UGC, but they were more often present among the most popular UGC items on a platform.

Notably, in many games, UGC creators focused much of their creative energy on content related to the game in question. This makes sense, given that the “audience” for game-based UGC will inevitably be fans of the game in question. In some cases, such as popular Spore avatars and Skyrim mods, fan works based on game content seemed to dominate referential UGC practices.

Very few fan works were directly critical of the source being cited, suggesting that “remix” parodies and critical juxtapositions, while they may be interesting from the standpoint of copyright law, are not actually representative of the majority of UGC practices. It appeared, instead, that many UGC creators referenced popular copyright-protected works faithfully. In games, it seemed there was a desire by creators to “import” largely faithful versions of popular works into the game context, and that the community of players found this sort of creativity valuable.

Finally, we observed that modular and less flexible UGC tools correlated with a decrease in copyright issues. When users were supplied with prefabricated components that they could
arrange in limited ways, this also limited their range of referential expression. Conversely, more flexible tools and “denser” genres of authorial production (e.g. video, scenarios) correlated with higher levels of copyright issues.

Our survey data will benefit from further analysis, but it is clear that, among players, UGC practices are very popular. However, while the majority of respondents stated that they had engaged in UGC practices, fewer than half indicated that they had shared their work online. Almost all players, however, had downloaded content created by other players.

UGC practices and motivations differed substantially according to variables such as age, education, and gender. For instance, players who prefer to use personal computers, as opposed to gaming consoles, generally had a higher level of engagement with UGC. This finding arguably relates to Jonathan Zittrain’s concept of generativity—the PC is a much more open platform for UGC production. Further analysis of our survey data will likely reveal additional interesting correlations in UGC practices.

Our survey of professionals in the video game industry was surprising with respect to the variety of opinions offered on UGC and copyright law. While most respondents believed the industry trend was toward greater use of UGC, there seemed to be a high level of concern about how it could be accommodated with existing game designs. With respect to copyright, respondents often had very different opinions (sometimes diametrically opposed) about the desirability of referential practices in player UGC. Some encouraged players to copy and modify their work, while others felt this violated their rights as video game authors.

* * *

We began the project with few intuitions about what we might find. Now that we have collected this data, its relevance to the reader will probably depend on the reader’s own prior convictions and assumptions. This data does not “answer” all the policy questions concerning UGC, but it does provide a clearer picture of the contemporary landscape. It also provides a more solid basis for future debates about the relationship between UGC and copyright.
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