The prevalence of social production and the increase in User Generated Content (UGC) destabilize some of the fundamental premises of our current copyright law. Copyright law is primarily designed to regulate the relationships of a single owner with other non-owners and is focused on the sovereignty of the author/owner. Social production, by contrast, requires us to articulate a matrix of relationships between the individual, the facilitating platform and the communities and crowds involved in social production. The transition from industrial production to social production transforms the social relations associated with the production of content and therefore requires adjustment of the institutions that design such relations.

This Article closely examines the social dimension of content production and analyzes the consequences for the governance of content in the social web. The Article proceeds as follows: Part I describes social production and analyzes the implications for the stakeholders involved. I focus on three key features of social production which affect why we create, how we create, and what assets are generated by the process of creation. Part II explains why social production might be incompatible with the current copyright regime. In particular, I argue that copyright law mainly defines rights against strangers and fails to provide a framework for managing the rights and interests within a gigantic group of collaborators. Furthermore, the
exclusivity offered by copyright law may undermine social motivation and collaborative production. Finally, in Part III, I outline some of the challenges for legal policy.

INTRODUCTION

Digital networks are constantly challenging copyright. In fact, the copyright regime is a regime in crisis. The digital crisis of copyright has been widely discussed in literature for more than two decades, beginning with the introduction of software and continuing with digital networks. The ease of copying and the difficulties of identifying, monitoring and prosecuting millions of users who engage in massive copyright infringements have raised serious doubts about the relevance of copyright in the age of digital networks. Some have announced "the death of copyright" or called for replacing the current regime with a levy-based system. Others have called for strengthening

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3 Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd., 125 S. Ct. 2764, 2775 (2005), Justice Souter: The tension between the two values is the subject of this case, with its claim that digital distribution of copyrighted material threatens copyright holders as never before, because every copy is identical to the original, copying is easy, and many people (especially the young) use file-sharing software to download copyrighted works. This very breadth of the software’s use may well draw the public directly into the debate over copyright policy . . . the ease of copying songs or movies using software . . . is fostering disdain for copyright protection.
4 John Perry Barlow, The Economy of Ideas, WIRED, Mar. 1994, available at http://www.wired.com/wired/archive/2.03/economy.ideas.html; Eben Moglen, Anarchism Triumphant: Free Software and the Death of Copyright, FIRST MONDAY, Aug. 2, 1999, http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/84/594: “We are predicting the future in a very limited time sense: we know that the existing rules, which have yet the fervor of conventional belief solidly enlisted behind them, are no longer meaningful.”
the hold of copyright in the digital age by both expanding the scope of protection to include new rights and by enhancing the legal remedies.  

The crisis of copyright in the digital era, however, goes further than simply posing an enforcement challenge. Digital networks are fundamentally transforming the production of content in ways that challenge the basic tenets of copyright law. In this Article, I argue that what is missing from the current debate regarding copyright law in the digital era is the social dimension. As numerous scholars have noted recently, digital networks facilitate the emergence of social production as a major type of content production. In this environment, individuals are playing a more significant role in the production of content than they did in the past, and often work together with varying degrees of coordination. Low communication costs enable new forms of coordination and collaboration outside of the organizational structures of firms and states. Coordination is often facilitated by social media platforms, both commercial and nonprofit. The emerging structures of digital production are no longer confined to producer/consumer or author/user relationships. They must be understood as a triangle consisting of a user,
a community of interacting users (the social dimension), and a facilitating platform (either commercial, NGO, or governmental).

The prevalence of social production and the increase in User Generated Content (UGC) destabilize some of the fundamental premises of our current regulatory approaches. The social dimension is currently missing from our copyright law. Except for rare cases, copyright law is primarily designed to regulate the relationships of a single owner with other non-owners and is focused on the sovereignty of the author/owner. Social production, by contrast, requires us to articulate a matrix of relationships between the individual, the facilitating platform and the communities and crowds involved in social production. The old copyright toolkit which is based on the authorship/ownership paradigm may no longer be sufficient for addressing these needs. Social production introduces both new stakeholders with distinctive interests that must be addressed, and an indispensable added value that must be preserved. The transition from industrial production to social production transforms the social relations associated with the production of content\textsuperscript{10} and therefore requires adjustment of the institutions that design such relations. A legal framework for governing the output of social production should therefore rest on a better understanding of the social dimension and the risks and opportunities it entails.

This Article closely examines the social dimension of content production and analyzes the consequences for the governance of content in the social web. It underlines the limitations of copyright law and points to the need to rethink our conceptual framework and retool our legal regime. I argue that the social dimension of online production of content requires a fundamentally different perspective regarding the governance of access to creative works. I also offer some insights into how we might reconceptualize the social dimension of online behavior. The Article proceeds as follows: Part I describes social production and analyzes the implications for the stakeholders involved. I focus on three key features of social production which affect why we create, how we create, and what assets are generated by the process of creation. Part II explains why social production might be incompatible with the current copyright regime. In particular, I argue that social production involves concerns and interests that are not addressed by copyright law’s focus on establishing the sovereignty of owners over creative works. Copyright law mainly defines rights against strangers and fails to provide a framework for managing the rights and interests within a gigantic group of collaborators. Furthermore, the exclusivity offered by copyright

\textsuperscript{10} TAPSCOTT & WILLIAMS, supra note 8.
law may undermine social motivation and collaborative production. Finally, in Part III, I outline some of the challenges for legal policy.

I. SOCIAL PRODUCTION OF CREATIVE CONTENT

A. The Transformation of Content Production

Over the past decade, we have witnessed the flourishing of social production of content. The social production of content is described by the literature as a process whereby individuals band together to generate informational works of all kinds through social sharing and exchange. Digital technology has reduced the cost of generating creative content and communicating it to the public: the costs of processors, hosting facilities and communication have been dramatically reduced, making these means available to the masses. This has enabled individual users to generate content and share it with communities of their choosing. By using mailing lists, uploading clips to YouTube, managing a blog or simply posting a comment on one, users are now able to reach out to a wide audience at almost no cost. Users can take pictures of news events and make them available worldwide via their cell phones; participants in online forums are able to share their thoughts and ideas, or rate and review content


12 See TAPSCOTT & WILLIAMS, supra note 8, at 10-11:
Most people were confined to relatively limited economic roles, whether as passive consumers . . . or employees trapped deep within organizational bureaucracies . . . . In all, too many people were bypassed in the circulation of knowledge, power, and capital, and thus participated at the economy’s margins. Today the tables are turning. The growing accessibility of information technologies puts the tools required to collaborate, create value, and compete at everybody’s fingertips.
that is made available online. Information is thus increasingly generated through collaboration and exchange.

The rise of UGC and social production is transforming the landscape of content production. UGC stands in sharp contrast to mass production of content. During the second half of the twentieth century, the production and mass distribution of content were dominated by the content industry: mass media, book publishers, record companies and the movie studios. The production process and the dissemination of the work to the public were orchestrated by profit-maximizing firms that worked within a market framework. Communication to the masses used to be costly: the distribution of physical copies or the broadcast of TV shows required an expensive infrastructure, one which was owned and operated by broadcasters and publishers. The content industry invested in producing a master copy of the work (a novel, a news report, a television series or a movie) and recouped their investment by selling copies at a monopoly price or by licensing exclusive broadcast rights. It was therefore necessary for the content industry to exercise exclusivity over the economic exploitation of the works it produced.

Nowadays, content is no longer produced solely by firms. It is also generated by individual users working alone or in collaboration with others. UGC and mass collaboration have become central phenomena characterizing the Web 2.0 environment. Individual users are playing an ever-increasing role in the production of content. The availability of low-cost Internet access enables individual users to communicate their creative materials to a large audience, thus increasing their potential impact on the cultural scene and the public sphere. The lower cost of coordination has also led to the emergence of a new, radically decentralized mode of production, enabling individuals to collaborate in peer-production of information. As forcefully argued by Benkler, digital networks have facilitated a dramatic shift from the Industrial

13 Users are also able to manage an online profile on a social network or communicate with others via social networking sites. According to the IDATE-TNO-IViR study, searching and e-mailing are the dominant usages on the internet. In 2006, "watching film, TV or video clips" and "ratings and reviews" have become popular usages on the internet. Generally, the most dynamic activities are related more to entertainment content than communication usages, although these usages are also significant. The data shows an impressive increase in the use of social platforms between 2006 and 2008. See IDATE, TNO & IViR, USER-CREATED-CONTENT: SUPPORTING A PARTICIPATIVE INFORMATION SOCIETY 50-53 (2008).

14 BENKLER, supra note 8 at 106-16.

15 See IDATE, TNO & IViR, supra note 13, and accompanying text.
Era to what he names the "Networked Information Economy" in which content can be generated by a large number of peers who are not formally organized by firms or employers.\textsuperscript{16} Benkler maintains that the production of information, knowledge and culture no longer requires management by the hierarchy of firms.\textsuperscript{17} The negligible cost of communicating and processing information makes coordination and integration cost-effective in a way that they weren’t before, enabling large-scale collaborations. These features, Benkler concludes, make it possible for individuals, nonprofit organizations, and groups to play a significant role in producing informational works.\textsuperscript{18}

At the normative level, social production is somewhat controversial. Some scholars believe that the networked information environment is a step forward towards a more cooperative social interaction.\textsuperscript{19} From this perspective, the introduction of digital networks dissolved the monopoly of the culture industry over the means of distribution to the masses.\textsuperscript{20} Individual users have acquired the power to perform what Manuel Castells calls \textit{mass self-communication},\textsuperscript{21} by which independent creators more frequently become the focus of worldwide attention and works created by amateurs attract

\begin{enumerate}
\item \textsuperscript{16} \textit{Benkler, supra note 8, at 99-106.} Yochai Benkler, \textit{Coase’s Penguin, or, Linux and the Nature of the Firm}, 112 YALE L.J. 369, 381-84 (2002) [hereinafter Benkler 2002], argues that the more “computers and network connections become faster, cheaper, and more ubiquitous” so the social production becomes much more significant. According to Benkler, id. at 404-06, social production emerges due to several features of the networked information economy: the object of production (information); the dramatic decline in cost of the means of production (cheap processors); the low cost of communication; and its availability to creative talent.
\item \textsuperscript{17} \textit{Benkler, supra note 8, at 99.}
\item \textsuperscript{18} \textit{Id. at 106.}
\item \textsuperscript{20} I use the term “culture industry” as it was used by the Frankfurt School theorists Max Horkheimer and T. W. Adorno to describe the commercial mass culture which marked the industrialization and commercialization of culture under capitalist relations of production. See \textit{Theodor Adorno & Max Horkheimer, The Culture Industry: Enlightenment as Mass Deception, in Dialectic of Enlightenment} 120 (John Cumming trans., new ed. 1993) (originally published as \textit{Dialektik der Aufklarung} in 1944).
\item \textsuperscript{21} \textit{Manuel Castells, Communication Power} 55 (2009):

\begin{quote}
It is mass communication because it can potentially reach a global audience, as in the posting of a video on YouTube, a blog with RSS links to a number of web sources, or a message to a massive e-mail list. At the same time, it is self-communication because the production of the message is self-generated, the definition of the potential receiver(s) is self-directed, and the retrieval of
\end{quote}
large audiences. Individuals thus not only have a better chance of entering the conversation, but also of initiating conversations and raising awareness of issues that are essential to their agenda. Seen from this viewpoint, the shift from an environment dominated by the highly-concentrated culture industry to a hybrid environment where content is also generated by individual users and groups is a democratization of the public sphere. It enables wider participation in cultural production and political discourse and facilitates a "creative audience" that is able to challenge the meaning of cultural content produced by the media. The shift from one-to-many to many-to-many mass self-communication multiplies the entry points into the conversation and therefore diversifies public discourse. It brings more authentic user voices into the conversation, cleansed of any commercial influence.

Other scholars are more skeptical. One concern is the ineffectiveness of peer speech: users can convey their messages, but the traditional mass media still has an important role in making this speech effective and performing its watchdog functions vis-à-vis the government. Another concern is the deficiencies of the new intermediaries that facilitate social production. While the distribution of UGC is no longer dependent upon the mass media and generating collaborative content no longer requires the organizational structure of firms, social production is still facilitated by intermediaries: commercial and nonprofit online platforms that perform a wide range of specific messages or content from the World Wide Web and electronic networks is self-selected.

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23 Halbert emphasizes the potential social and political value of a creative audience who can challenge meaning and create the meaning of culture content by posting or transforming content. Debora Halbert, Mass Culture and the Culture of the Masses: A Manifesto for User-Generated Rights, 11 VANDERBILT J. ENT. & TECH. L. 921 (2009); see also Niva Elkin-Koren, Making Room for Consumers Under the DMCA, 22 BERKELEY TECH. L.J. 1119, 1138 (2007) (describing the role of the consumer-author and the consumer-participant in generating culture).

24 See CASTELLS, supra note 21.

of functions, from technical enabling to social facilitation. Huge social media platforms such as Facebook, Twitter, Google/YouTube and Wikipedia facilitate exchange and collaboration, enabling users to communicate with friends and colleagues and to establish online communities.26 Such mega platforms are dominated by a small number of players, and may suffer from ills similar to those suffered by mass media.27 Finally, there is growing concern about the rights of individuals where speech is facilitated by commercial platforms that control both access to content and information about the end users. Some worry about the privacy and autonomy of users,28 while others are concerned about the potential exploitation of individual users by social media platforms, especially when those platforms are commercial players.29

B. The Attributes of Social Production

Social production is often described as standing in sharp contrast to a proprietary regime. It is understood not only as a social and economic phenomenon but also as a legal phenomenon that reflects a nonproprietary regime, where content is developed through collaborative efforts without any particular claims for exclusive rights.30 This approach, however, is somewhat

26 See Elkin-Koren, supra note 9, at 120.
29 Trebor Scholz, Market Ideology and the Myth of Web 2.0, FIRST MONDAY, Mar. 3, 2008, http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2138/1945; see also Christian Fuchs, Information and Communication Technologies and Society: A Contribution to the Critique of the Political Economy of the Internet, 24 EUR. J. COMM. 69, 82 (2009). Fuchs argues that users who generate content on advertisement-based free online platforms are subject to surveillance and become a commodity sold to advertisers. Personalized advertisement, he argues, is an expression of the "society of control," which activates individual users to continuously participate in and integrate themselves into the structures of exploitation. Thus, he argues, "[t]he category of the prosumer commodity/produser commodity does not signify a democratization of the media towards participatory systems, but the total commodification of human creativity."
30 In his book, Benkler defines social production as including content "that is not based on exclusive proprietary claims, not aimed toward sales in a market for either motivation or information, and not organized around property and contract claims to form firms or market exchanges." BENKLER, supra note 8, at 105.
circular, as it relies on the governance of the content to define the processes of content production.\textsuperscript{31}

Since my purpose here is to analyze the adequacy of the current regime and the extent to which it serves the needs of social production, it is first necessary to characterize social production independent of the governing structures which were designed to manage it. What features make the emerging mode of production "social"? I focus here on three key features of social production which affect why we create, how we create, and what assets are generated by the process of creation. Social production, I argue, is largely driven by social motivation. This mode of production is collaborative in nature and is generated by interaction between members of a social group. Finally, the output of social production goes beyond the production of the content itself. Social production also generates social capital and political outcomes.\textsuperscript{32}

\section{Social Motivation}

A key feature of social production is social motivation. The industrial production of content was based on monetary incentives, with firms designed to maximize profits. Individual users, however, create for a wide range of reasons: self-expression, creative satisfaction, a desire to establish online reputation or a wish to strengthen one's self-esteem.\textsuperscript{33} While artists have always been motivated to create by a wide variety of non-monetary incentives,\textsuperscript{34} the industrial production of content shaped creative processes within a market framework, emphasizing considerations of potential profitability and economic constraints. When individuals and communities begin to play a more significant role in the production of content, they bring a variety of motivations to the forefront.\textsuperscript{35}

\textsuperscript{31} Moreover, many classic examples of social production, such as Free Software and Wikipedia, rely on copyright for governance, even though the licensing scheme of free software (the General Public License (GPL)) is using copyrights in a subversive manner.

\textsuperscript{32} See Steven J. Horowitz, Designing the Public Domain, 122 HARV. L. REV. 1489 (2009) (arguing that social production generates some added value such as a sense of belonging, relationships, identity and community).

\textsuperscript{33} See IDATE, TNO & IViR, supra note 13, at 150-54; Benkler 2004, supra note 11, at 279-81, 321-28.

\textsuperscript{34} Diane Leenheer Zimmerman, Authorship Without Ownership: Reconsidering Incentives in a Digital Age, 52 DEPAUL L. REV. 1121, 1136-37 (2003).

\textsuperscript{35} Individuals, Benkler argues, "are not monolithic agents." They are motivated by monetary rewards, but also by social and psychological needs. BENKLER, supra note 8, at 98-99.
Human creativity involves a complex matrix of motivations and incentives, often working simultaneously to induce or halt a particular behavior. Benkler, for instance, lists intrinsic hedonic rewards and socio-psychological rewards, which are a function of the cultural meaning associated with the act of creation, as non-monetary incentives to create. These include the benefits from acknowledgment and reputation, but also social relations such as a notion of belonging and friendship. Horowitz offers a different taxonomy of intrinsic motivation, focusing on three types of motivations: empowerment, community, and fairness. Empowerment emphasizes autonomy and competence and a sense of effective participation; community focuses on the need to connect to others; and fairness focuses on maintaining a fair system which is perceived as fair by all participants.

There are different ways of classifying non-monetary motivations. For the purpose of my current inquiry, it is useful to distinguish between social motivation and other non-monetary incentives. Such an analysis could help us identify the social dimension that is often missing from policy discussions related to the information environment. Social motivation represents a special type of non-monetary motivation that arises from a social context — a context that transcends the individual creator. The distinction offered by Peddibhotla and Subramani between "other-oriented" and "self-oriented" motives is useful for understanding this special quality of social motivation. "Self-oriented motives" refers to intrinsic motivations such as fun, self-expression or personal development, and also to utilitarian motives. "Other-oriented motives" refers to social affiliation, altruism, and reciprocity. While self-oriented motives can sometimes serve as a substitute for monetary

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36 Id. at 92-99.
38 Id. at 1499, 1500-01.
39 Horowitz therefore concludes that "[t]o best support intrinsic incentives to produce information, the public domain ought to empower individuals, connect them within a community, and maintain a fair system." Id. at 1503.
41 I use "incentives" "motives" and "motivations" interchangeably throughout the Article.
rewards, social motivation cannot, as it reflects a continuum, an ongoing process, rather than a single, one-time exchange with an indistinct party. Social motivation involves a relationship with a concrete or partially imagined community. The act itself — sharing a photo, discussing the news — derives its meaning from the actual engagement and interaction with others. These aspects of social motivation are not reducible to a market exchange and, as I’ll further explain below, might be especially important for copyright policy.

Self-oriented motives focus on the benefits that people derive from creative activity. First and foremost there is a natural drive to create. People are creative beings. Creation often reflects a human desire, a passion to act upon the world, to constitute something from nothing. The rich online repository of UGC — chats, contributions to forums, posts on blogs, clips shared on YouTube — reflects the human longing to engage with the world, to create meaning. Creativity is often driven by intrinsic satisfaction. Poets, sculptors and musicians created monumental works of art long before there was any intellectual property system offering them a legal right over their creations; they created simply for the sake of making art. Writing, playing music and taking pictures may be motivated by creative passion, pleasure, satisfaction and often simply by fun. Other types of passions — ego, a hunger for power, competition, confrontation — may also drive creation.

Although it shares some qualities with self-oriented motives, social motivation is fundamentally other-oriented. While self-oriented motives focus on the individual creator, in other-oriented motives the social context plays a key role. Users who generate and distribute content in social media platforms often engage in a social activity such as sharing opinions (as in

43 See MARTIN BUBER, Education, in BETWEEN MAN AND MAN 89 (Ronald Gregor Smith, trans., 1955) (arguing that humans are born with a capacity of creative powers, and a desire to create something from nothing); see also Rebecca Tushnet, Economies of Desire: Fair Use and Marketplace Assumptions, 51 WM. & MARY L. REV. 513, 522-27 (2009) (analyzing creators’ own accounts of their creative experiences and discussing authors’ self-reported experiences of creativity).
44 See Zimmerman, supra note 34.
blogs), sharing skills and knowledge (as in forums), rating films and articles, or
tagging photos and sharing videos (as in social networks). Sharing something
you have created yourself or simply something you have watched or otherwise
experienced is a type of social interaction that adds a layer of meaning to the
experience of reading and writing. Individual users as social beings may
simply want to interact, communicate, connect with other people, be heard
by their fellow users, feel they belong and affiliate themselves with groups.47
Engaging in a conversation is one aspect of social motivation.48 Creative
activities often aim at expressing oneself in a conversation with others. The
interactive nature of digital networks allows users to gain the attention of their
fellow users, to be heard, attended to, and receive some feedback. Thus, it
may turn self-expression simply for the sake of intrinsic satisfaction into a
communicative act which engages with others.

Another aspect of social motivation is a sense of belonging to a community.
For instance, a study of firm-hosted technical support for online communities
shows that the customers’ willingness to contribute to such online support
services is influenced by a customer’s penchant for online interaction,
feeling of commitment to the community, and the perceived informational
value.49 Another example is Wikipedia. Several studies exploring why people
write and edit entries on Wikipedia have focused on Wikipedia’s communal
nature.50 A sense of community reflects a commitment of community members

to Cifflolilli, social motivations involve a "desire to take part in the production of a
collective good, a need for belonging, a need to support a specific community."

47 Id.; Lee Rainie, John Horrigan, Barry Wellman & Jeffrey Boase,

48 Erickson and Herring introduced the notion of "persistent conversation." See Thomas Erickson & Susan C. Herring, Persistent Conversation: A Dialog Between Research and Design, in 4 HIC C Proceedings of the 38th Hawaii International Conference on System Sciences 106 (2005), available at http://www.computer.org/portal/web/csdl/doi/10.1109/HICSS.2005.491 (arguing that persistent conversation carries social and ethical consequences deriving from the creation of permanent records of interactions that used to be ephemeral).


50 See, e.g., Cifflolilli, supra note 46 and accompanying text; Sheizaf Rafaeli & Yaron Ariel, Online Motivational Factors: Incentives for Participation and Contribution
towards other members of the community and also to the group as a whole.\textsuperscript{51} It is often based on reciprocity, which is the tendency to contribute for the benefit of those from whom you have benefited in the past.\textsuperscript{52} Accordingly, individuals sometimes produce content (write reviews, edit entries on Wikipedia) to reciprocate for the benefit they have received from their fellow users. This type of reciprocity is a strong social motivation, as it encourages further contribution by individuals in a particular social context where it becomes the norm.

Several studies have focused on social interaction, defined as the desire for affiliation and belonging.\textsuperscript{53} One study of early experimentation with the crowdsourcing site Google Answers showed that even when significant monetary rewards were involved, the economic incentive was strongly moderated by social variables.\textsuperscript{54} The process of social production is focused not on individuals, but on groups and communities. This also changes the nature of consumption. The experience of content becomes extremely social: we watch videos rated by our peers, listen to music recommended by our contacts and seek to share content with our different communities. Social Plugins such as Facebook’s Like Button, Recommendations and Activity Feed allow users to see what their friends have liked, commented on or shared on sites across the web.\textsuperscript{55} In 2010, participating in social networking sites

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\textsuperscript{51} Rafaeli and Ariel argue that “[o]ne of the strongest motivations to participate and contribute to a community is users’ sense of community.” See Rafaeli & Ariel, supra note 50, at 257. They use a definition of a “sense of community” offered by McMillan and Chavis. David W. McMillan & David M. Chavis, Sense of Community: A Definition and Theory, 14 J. COMMUNITY PSYCHOL. 6, 9 (1986) (“[A sense of community] is a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together.”).


was the most popular online activity. We increasingly seek to engage with content rather than simply acquire access to a copy of it. A common example is the reading of news reports together with the stream of responses. Another example is the remixing and mashups of videos and music. The information flows created by such interactions often become part of the content itself. Web users are not interested in UGC just because it provides a fresh perspective or is viewed as more reliable and unbiased; users are also seeking participation in a community. A recent study shows that users are willing to pay a premium for the opportunity to participate and contribute to a community.

Social motivation must be viewed within a rich matrix of different motivations to create, including monetary rewards. The Social Web offers a variety of economic incentives. Users can monetize their activities and generate revenues from the content they create by incorporating advertisements in content and on sites; charging subscription fees; licensing; charging commission on UGC sales; and raising sponsorships, donations and public funding. Some users, such as those in open source companies, are extracting revenues by charging for additional goods and services, selling support consulting services and training. Others may use the free distribution

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59 See OECD, supra note 27 (describing several business models for monetizing UGC: charging viewers for services, advertising, licensing of content and technology to third parties, and selling goods and services); IDATE, TNO & IViR, supra note 13, at 98-118. According to this study, most UGC services rely on advertising revenues. Forecasts indicate that in 2010, the Internet will be the number three medium in terms of advertising investments worldwide (behind TV and the written press). Other business models include subscription fee and pay-content. Users can earn an income from their creation either directly, through the sales of their content, or indirectly, by establishing a professional reputation through their postings. According to a recent study, most bloggers have some way to generate revenue from their blogs: advertising; search ads; display ads; affiliate marketing; paid posting; being a spokes-blogger; rich media ads. Posting of Dave White to Technorati, Blogging For Profit, http://technorati.com/blogging/article/day-4-blogging-for-profit/ (Oct. 13, 2009).

60 See Kaj Arno, Dual Licensing — A Business Model from the Second Generation of Open Source Companies, in How Open is the Future? Economic, Social
Photographers may post their pictures on Flickr in order to share their experiences with friends and colleagues, but at the same time may hope they will be able to cash in on their online reputation. Users might not be engaging in creative processes just for the money — but this doesn’t mean that they never profit from their creativity. In other words, even though content created by users is often not generated for profit, it is increasingly being shaped by market forces. What makes UGC different, however, is the fact that in contrast to industrialized content, it is not produced for the sole purpose of maximizing profits, even though it can be distributed in a commercial setting and may, in fact, generate revenues.

The online environment creates new types of financial pressures for participating users. Users are facing the rising costs of establishing an online reputation, managing an online presence and maintaining their online visibility in different social media platforms. These functions may require large investments in search enhancement, website optimization, and viral promotion. As individual creators move to the forefront of culture production, they must compete with commercial players for online exposure and users’ attention. To some extent, individuals are adopting promotional techniques to develop their "brands," control their identities, and monetize the informational value they add, that were formerly used only by commercial entities.61

The presence of monetary interests is further strengthened by the fact that social media platforms often generate revenues from social motivation. They sometimes share advertising revenue with users by offering rewards for high ratings or special performance.62 Users are increasingly being recruited by marketers to promote products, services or political agendas by viral advertising and peer promotion in social networks. Bloggers and users who have been identified as emerging social leaders might be paid by sponsors for promoting products by posting product reviews, generating high

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62 Advertising services such as Google AdSense automatically deliver targeted ads to blogs and personal homepages, sharing the collected revenues from advertising with the hosting website. Google, Google AdSense, https://www.google.com/adsense/ (last visited Oct. 1, 2010).
ratings or offering tips on products and services.\textsuperscript{63} Commercial platforms may also integrate users’ contributions into products or services provided to their respective customers.\textsuperscript{64}

The coexistence of social motivation and commercial interests may destabilize social motivation and cause tensions at three levels: first at the individual level; second, among users; and finally, between users and social media platforms. At the individual level, the mixture of for-profit and nonprofit activities motivated by monetary and social interests might be confusing. Monetary incentives may sometimes undermine intrinsic motivation. Studies show that human creativity is primarily driven by intrinsic motivation and that monetary rewards can sometimes actually stifle creativity.\textsuperscript{65} Second, the introduction of monetary rewards may interfere with the sense of social solidarity which provides the basis for engagement in social production, thereby reducing the motivation to collaborate. A third dimension of the clash between social motivation and monetary rewards is the relationship between users who participate in generating content and the social media platforms that facilitate such processes. The introduction of monetary rewards may instill distrust and suspicion between users and platforms.\textsuperscript{66}


\textsuperscript{64} Some users’ input is incorporated into the presentation of traditional media, such as CNN’s iReporter. Another example is Amazon’s Mechanical Turk (MTurk), which creates a crowdsourcing marketplace where users can sign-up for tasks that cannot be performed by computers (Human Intelligence Tasks — “HIT”) for monetary payments. Requesters post tasks (called HITs) such as choosing the best among several photographs or writing product descriptions. Providers browse among existing tasks and complete them for a monetary payment set by the Requester. See Amazon Web Service, Amazon Mechanical Turk, http://aws.amazon.com/mturk/ (last visited Oct. 1, 2010).


\textsuperscript{66} Consider, for instance, the decision of the video storage Metacafe to cancel its Producer Rewards Program, which offered monetary rewards per 1000 views to producers of videos which passed Metacafe’s strict guidelines and achieved at least 20,000 worldwide views at a minimal ranking. Metacafe Termination of the Producer Rewards Program (May 6, 2007), http://blog.metacafe.com/?s=rewards. Earlier changes to the program raised doubts regarding the intentions of the platform. See Mark ‘Rizzn’ Hopkins, Metacafe Changes Producer Rewards; Users
Indeed, several scholars have suggested that platforms are exploiting the free content and unpaid labor of users.67 This could further compromise social motivation.

As I shall further discuss below, these threats to social motivation can be partially addressed by legal policy.68

2. Collaboration

Another aspect of social production is the social nature of the process of creation through interaction and collaboration. The collaboration with others is often what drives someone to join the productive initiative, and studies show that collaboration plays an important role in enhancing social motivation.69

Digital networks lower the cost of coordinating joint efforts, thus enabling a massive number of users to join forces in creating new collaborative works. The ease of linking together and coordinating individual efforts facilitates the emergence of new types of group actions.70 Consequently, not only individual users but also groups of users working together are playing a much bigger role in generating and distributing new types of content.71 Collaborative initiatives have become quite prominent. Classic examples are programmers contributing to code and fixing security bugs in free software, users editing entries on Wikipedia and collaborative tagging and ranking generated by users of YouTube and Digg.

The boundaries of the collaborating groups are dynamic. Often, people may join the group only to leave it instantly. While some collaborative activity is ad hoc, such as political campaigns prior to elections, other types of collaboration are long term. Large-scale collaborations are feasible as long as diverse contributions can be pooled and merged into a single effort.72 Large-scale collaboration involving a massive number of contributors is not

67 See Scholz, supra note 29.
68 See infra notes 113-18 and accompanying text.
70 Shirky, supra note 8, at 50-51.
71 BENKLER, supra note 8, at 99-106.
only cost-effective, but also becomes necessary in order to compete for users’ attention and to make an impact in the online information smog.

Online coordinating tools enable collaboration without a legal organizational structure coordinating the tasks undertaken by different contributors. Contributors are not working under any legal duty to perform particular tasks, and are usually acting voluntarily. The extraordinary success of colossal collaborative projects such as Linux and Apache demonstrates that a complex system on a large scale can be designed and maintained by a sizeable group of unorganized collaborators in a nonproprietary setting. At the same time, however, collaborative initiatives are often facilitated by social media platforms. These platforms perform a wide range of functions, from technical enablement to social facilitation, including supporting, hosting, searching, aggregating, filtering and diffusing UGC.73

The character of collaboration varies. Collaboration can take the form of teamwork (such as in Wikipedia), or individual contributions which are accumulated into a single collage. Shirky identifies three levels of group action which differ according to the strength of the obligations among the individuals in the group: Sharing, Cooperation, and Collective Action.74 Sharing represents the lowest level of social commitment; at this level, individuals knowingly share their works with the group (or with a selective list of individuals). Content in this type of group action can be produced by the aggregated value of independent contributions, such as a collage of pictures on Flickr or Picasa or a video repository such as YouTube. Ratings provided by users of these platforms may promote this group action to the next level.

Cooperation is the next, higher level, of group action. It involves mutual synchronization of the individual’s behavior and the behavior of other group members.

Footnotes:
73 A user posting on her own blog might have to use a hosting service and an Internet Access Provider, as well as search engines and location tools to enhance the content exposure. But even weblogs might be considered a platform. First, a blog in itself may host UGC (comments by others) and in this sense it might also function as an online platform. Second, even though it is relatively easy to install blogging software on a server to enable blogging, using a blog hosting service like Blogger makes it easier (by removing the technical burden of maintaining a hosting account and a software application).
74 SHIRKY, supra note 8, at 49. The focus on groups is somewhat misleading. Indeed, the human desire to interact, communicate, or validate each others’ experiences is innate. At the same time, however, one must be careful in distinguishing between a group as a distinct category — namely an entity that is independent of its particular members, and a simple interaction among individuals (either intimate or public).
The intentional actions of the individuals involved requires that the group members — with whom one must coordinate her actions — are concretely defined. This involves a higher level of reciprocity; therefore, this level of group action creates a group identity.

Collective Action is the highest level of group effort, as it assumes that decisions adopted by the group become binding upon all the individual members. Collaborative production can create tensions among individuals and between individuals and the group, as the process requires making collective decisions about the exploitation of the collaboration’s output. When creative works are generated collaboratively, questions arise regarding the joint-management of such a collaborative production. How should the outcome of social production be managed? Who shall have access to it and under what terms? Who is entitled to credit and how? Who has the right to transform, edit and improve the content? Who can make binding decisions on how this outcome will be used or whether it will be commercially exploited?

The lack of a formal organizational structure makes it difficult to achieve collective action in a large-scale collaboration. Users are working together voluntarily with no hierarchy and without any single entity that is authorized to make decisions about how to exploit the output of such collaboration. Furthermore, no single entity adequately represents either the views of each of the collaborating users or, when appropriate, the choice of the group as a whole. Collaboration in making binding decisions regarding the future use of content requires that some voice be given to the individual users who are involved in the joint effort. At the same time, however, as a joint project, some weight should be given to the shared agenda of the coordinated efforts, and adequate procedures should be adapted in order to negotiate such an agenda.

The lack of a formal organizational structure does not mean that the coordinating parties are working in a normative vacuum. Relationships among the collaborating users are often shaped by the design, economic models and legal strategies of the social media platforms which facilitate such coordination. Coordinating tools are not neutral. Their design and architecture often determine the nature of collaboration and shape the relationships among users. For instance, the platform architecture may

75 Id. at 49-50 (“changing your behavior to synchronize with people who are changing their behavior to synchronize with you”).
76 Id. at 53. Shirky argues that this type of group effort, where groups act on behalf of, and share consequences for, all of its members, is the hardest to achieve and is still relatively rare.
77 See Helen Nissenbaum, Values in Technical Design, in ENCYCLOPEDIA OF SCIENCE, TECHNOLOGY AND ETHICS, at lxvi (Carl Mitcham ed., 2005). But see Shirky, supra note 8, at 46 (arguing that platforms are neutral and facilitate uncoordinated group
determine whether collaborating parties must be identified or can choose to contribute anonymously to the conversation. The architecture could further define whether content can be transferred and thus become useful outside the facility.\textsuperscript{78} Collaboration is further subject to a variety of legal and social norms such as laws, licenses and Terms of Use (ToU). These are sometimes defined by the facilitating platforms and sometimes attached to a particular content.\textsuperscript{79} To further understand the nature of online collaboration it is therefore necessary to identify the mechanism of design (i.e., interfaces, language, protocols) and law (i.e., copyrights, ToU) which shape the behavior of individuals and groups in social production.

Collaborative production is a dynamic process of sharing and interacting in order to construct something together. The output itself is also dynamic and is collectively shaped through the ongoing contributions of users. The "romantic author" of the eighteenth century has made way for the social author of social media.\textsuperscript{80} This entails a new definition of work of authorship and a new approach to authorship that changes the focus from the individual to the social. The glue which ties the individual efforts together is the social context. At the same time, however, the lack of a formal organizational structure might make it difficult for contributing authors to agree on the shared norms that apply to their joint effort and, moreover, to adapt the rules which govern the use and exploitation of works to the changing circumstances. As I discuss in the following Part, copyright law that governs

\textsuperscript{78} For instance, Picasa, Google’s Web Album which allows organizing, editing, tagging and sharing photos, does not allow users to transfer their tagged pictures with the metadata from Picasa to other image hosting sites such as Flickr. For Facebook's strategy see Fred Vogelstein, Great Wall of Facebook: The Social Network's Plan to Dominate the Internet — and Keep Google Out, WIRED, June 22, 2009, available at http://www.wired.com/techbiz/it/magazine/17-07/ff_facebookwall.

\textsuperscript{79} For the plurality of norms applied to UGC, see Niva Elkin-Koren, Governing Access to Users-Generated-Content: The Changing Nature of Private Ordering in Digital Networks, in GOVERNANCE, REGULATIONS AND POWERS ON THE INTERNET (E. Brousseau, M. Marzouki & C. Méadel eds., forthcoming 2011).

\textsuperscript{80} At a more theoretical level, it has long been argued that creative processes are not played out in isolation — that authors always build upon the input of previous authors and that creative works are, in fact, meaningless outside of a social context. This view of creativity as a joint effort of a community to generate information flows within a cultural matrix is assuming a more visible presence in the online environment, as reflected by initiatives such as Wikipedia.
the exploitation of creative works does not provide an adequate framework for addressing these challenges. It confers on each of the contributing individuals the power to decide how to exploit their contribution and, when their contributions are inseparable, it forms a legal partnership among them.

3. The Outcome of Social Production and Social Capital
Social production not only generates content through coordination among peers, but may also enhance the social nature of existing communities. Collaboration in generating content could become a community-building tool. This process involves both personal and public conversations throughout the editing and the continuing revision of works. It involves various choices on issues such as which content to include and in what order of priority to include it, and whether to remove or rewrite a particular entry. These choices involve some shared decision-making mechanisms. The collaborating parties share some views and expectations regarding their activity. During the process, they are generating shared norms regarding contributing and sharing materials and certain conventions regarding editing and revising content.

Rafaeli and Ariel analyze the various elements that create a person’s sense of community. A community, they argue, is sensed “through membership, influence, integration, and fulfillment of needs, and shared emotional connection.”81 Membership requires identification with and a sense of belonging to the community, and a clear definition of the community boundaries that indicate who belongs to the community and who is considered an outsider. Influence requires that members feel empowered to influence the actions of the community, and at the same time that the community also has some influence over the actions of its members. Shared emotional connection, it is argued, depends on a shared community history which is often reflected in a sense of shared identity (“we,” “us”).82

Social production often facilitates institutions that strengthen the sense of belonging to a community, such as conflict management and dispute resolution. Such institutions are currently evolving in the social web. One example is Wikipedia’s dispute resolution system. Hoffman and Mehra studied this dispute resolution system and argue that it serves to weed out problematic users while encouraging potentially productive users to continue to dispute with one another, which is at the essence of the open wiki platform. Thus, they argue, the dispute resolution system is

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81 See Rafaeli & Ariel, supra note 50, at 258.
82 Id.
function for the community.83 Another example is Facebook’s announcement of a Bill of Rights and Responsibilities to allow users to comment on and participate in shaping the policies which govern the social network. The announcement followed a storm of public outrage in response to a unilateral change in Facebook’s terms of use.84 This participatory procedure for collective action was apparently necessary in order to regain legitimacy for the norm-making process adopted by the platform. Facebook discovered that unilateral redrafting of the ToU is unacceptable for its community of users and is viewed as illegitimate. A recent example of another community institution is the experimental community court of eBay, which enables any eBay member to appeal against negative feedbacks she has received on eBay which she believes were unfair. The online jury consists of 21 randomly selected eBay members.85

Taken together, these features are community-building tools. From this perspective, Wikipedia, for instance, could be viewed as encompassing more than simply tools for producing encyclopedia entries. It is a community of editors and readers who share a communal identity that is inherently argumentative.86 Similarly, eBay could be viewed as more than simply an e-commerce arena for buyers and sellers, but as offering membership in a business community with shared norms regarding business best practices and social sanctions.

All these aspects of social production — social motivation, the collaborative nature, and the social capital generated by this process — may have consequences for the debate over the best way to govern social production. How should the social dimension of co-production by an unorganized crowd be reflected? What mechanisms should be applied

83 David A. Hoffman & Salil Mehra, Wikitruth Through Wikiorder, 59 EMORY L.J. 151 (2009) (describing the evolution of this institution from an informal exchange of views, through mediation, and into an Arbitration Committee which applies fact-finding procedures and generates decisions based on policy and law, which constitute a virtual Wiki-common law).
85 After submitting the appeal, the person who left the controversial feedback is then asked to justify himself. The appellant has a chance to respond to the statement, after which the case is put before a jury of eBay members who vote on the case. The jury is authorized to remove the unfair feedback from the site. See eBay, Community Court FAQs, http://www.ebaycourt.com/cc/FAQ.jsf (last visited Aug. 9, 2010).
86 See Rafaeli, Hayat & Ariel, supra note 53 (arguing that Wikipedia is a dynamic, virtual knowledge-building community and not simply a repository of information).
to manage the outcome generated by social production? Before I turn to discussing these issues, I will describe the limits of the current copyright law as a regime for managing social production.

## II. SOCIAL PRODUCTION AND LEGAL POLICY

Legal policies related to the social web should aim at promoting social production by nurturing social motivation, facilitating collaboration, and increasing social capital. Copyright law, which was tailored to facilitate the business models of the content industry, is incompatible with the emerging environment of social production and fails to address its special needs.

In this Part, I describe some of the limits of current copyright law in promoting social production. In short, I argue that the tenets of copyright law stand in fundamental tension with social production. The exclusivity offered by copyright is sometimes unnecessary and may often undermine social motivation and collaborative production. I further argue that the legal toolkit offered by copyright law fails to address either the special needs of large-scale collaboration or the distinctive interests which require protection in the social web. Copyright law mainly defines rights against strangers and fails to provide a framework for managing the rights and interests within a gigantic group of collaborators.

### A. The Limits of Copyright

#### 1. Management of Collaborative Creation

A serious shortcoming of copyright law is that it fails to provide an organizational structure for social production in large-scale collaboration. Copyright law defines rights against strangers — rights of owners against non-owners. It entitles the owner to stop the unlicensed use of the work by potential exploiters. It lacks a framework for addressing the rights and duties of collaborators towards one another regarding their respective contributions and the exploitation of their joint effort. The law does not provide sufficient answers as to the appropriate mechanisms for governing the output of social production and resolving conflicts and disagreements related to it. This deficiency is particularly crucial in the case of large-scale collaboration among a massive number of users who are not organized by any formal legal structure.

Many questions may arise regarding the ongoing processes of generating and exploiting content through large-scale collaboration. For instance, who has the right to edit and transform a work created by many? Should each
participant be entitled to control her own individual contribution? How should the output of collaborative production be managed and subsequently governed? What rights should each participant have to their individual contributions? What rights should each of the users have to the outcome as a whole? Should users be free to use their contributions to a collaborative endeavor as they please? Is each user entitled to freely change, edit, transfer or otherwise distribute such works? What if editing the content or implementing a particular business model affects the endeavor as a whole, or at least the micro-contributions made by others? Are participants free to commercially exploit the outcome? Are they entitled to prevent others from using it?

Copyright law does not provide a functional way for addressing these questions in large-scale collaborations. Consider, for instance, new ways of exploiting Wikipedia. This free, web-based encyclopedia, which is the output of large-scale collaboration, can now facilitate printed versions through Print-on-Demand offered by PediaPress or through the German publisher Bertelsmann’s initiative to publish a special edition of selected items from German Wikipedia.87 Can any user, then, publish a printed edition of selected entries from Wikipedia for commercial purposes?88 Some users may view this as an abuse of their team effort. A printed version, edited by a single publisher and sold at a price, may contradict some of the things Wikipedia stands for: a free, online encyclopedia that reflects the input of thousands of users-editors, where knowledge is constantly subject to challenge; a collaborative endeavor that promotes a non-authoritarian and a pluralistic view of knowledge; and the widest possible dissemination of that knowledge. At the same time, however, a printed version may promote access to knowledge and may widen the potential readership of Wikipedia, making it useful outside the online environment. Commercial exploitation, one may argue, would not compromise free access. Free access to the online version will still be provided, but the printed version will provide some added value. How do we decide between these conflicting


88 Bertelsmann, one of the largest German publishing houses, announced that it would publish a printed edition of selected entries from Wikipedia Germany most commonly used search terms. See Noam Cohen, A Book with 90,000 Authors, N.Y. TIMES, July 19, 2008, available at http://bits.blogs.nytimes.com/2008/07/19/a-book-with-90000-authors/.
views? Regardless of our position on this particular matter, it is evident that copyright law does not offer a useful framework for addressing questions regarding this new use of Wikipedia, either at the normative or at the functional level.

The legal toolkit, which assumes collaboration under copyright law, is rather limited. Structurally, copyright law creates a governance structure that concentrates the power to authorize use in the hands of a single owner: the individual author, employer, exploiting firm, or even partners who share ownership. The law rests on the notion of a singular author, with only two exceptions to this rule: the doctrine of work made for hire and the notion of joint authorship.

A work-made-for-hire covers any work prepared by employees in the scope of their employment or commissioned works of certain categories listed by law, which the parties have defined as a work for hire in a signed written agreement. Within the framework of work made for hire, the employer is considered a single author which orchestrates the production process implemented by many employees who are basically acting as its long arm. The collaborative nature of online production does not fit neatly under this exception. That is especially true in the case of massive collaboration by thousands of contributors over time. Users who work together cannot simply be considered employees of a social media platform, or of the NGO or the corporate entity which operates it. They are often not officially hired by platforms to do any particular work, and they are not paid. There are rarely any formal employment relations between the social media platform and the collaborating users. The actions of users generating content are often spontaneous and independent and are not orchestrated by the social media platform or any other single entity. In fact, even when users have engaged in tasks which were seen as an integral part of the platform’s operation, they have been considered by the courts to be volunteers.

91 Courts interpreting the notion of employee and the scope of employment under the work-made-for-hire doctrine did not rely on employment law and developed a separate standard of interpretation. See Michael D. Birnhack, Who Owns Bratz? The Integration of Copyright and Employment Law, 20 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 95 (2009).
92 Steven Hetcher, User-Generated Content and the Future of Copyright: Part One, Investiture of Ownership, 10 VAND. J. ENT. & TECH. L. 884, 863 (2008) (arguing that UGC cannot be considered a work-made-for-hire since the users of social media platforms are not working for the platform).
93 The status of these volunteers for the purpose of employment benefits was raised
Several scholars conceptualize the relationship between platform and user as labor relations, emphasizing the economic value that users contribute to the platforms and the way the relations are shaped by ownership and control over the means of production. Indeed, any interpretation of the work relations between social media platforms and participating users needs to consider the economic role of users, regardless of the existence of any formal employment agreement. The crowd of creative volunteers lowers production costs by allowing businesses to take advantage of amateur users without having to compensate them or guarantee their employment environment. Yet it is hard to accept the view that users/authors are employees. What characterizes social production is that users voluntarily engage in it. When users generate reviews of books and movies and share them online, they do so as a matter of social practice. Therefore, users participating in social production cannot be conceived of as workers. Social media platforms such as Amazon can extract an economic value from user-generated reviews, but this does not turn the practice of offering comments into work that establishes labor relations between Amazon and the users.

Another exception to the notion of a singular author is Joint Authorship, which results in a Joint Ownership. Under the 1976 U.S. Copyright Act, "[a] joint work is a work prepared by two or more authors with the intention that their contributions be merged into inseparable or interdependent parts

in class action lawsuits that were filed against AOL regarding About.com over their volunteer labor force. Thousands of users were acting as Community Leaders on AOL during 1997-2005 when the program expired. In 1999 a group of former AOL Community Leaders ("CLs") filed a class action lawsuit against AOL seeking the payment of minimum wages for the valuable work they performed for AOL. Overtime pay was also being sought for CLs who worked over 40 hours a week. See Hallissey v. Am. Online, Inc., No. 99-CIV-3785, 2006 U.S. Dist. LEXIS 12964 (S.D.N.Y. Mar. 20, 2006) (holding that AOL Community Leaders, who were unpaid volunteers, could qualify for compensations under the Fair Labor Standards Act of 1938 (FLSA) 2006).

See Scholz, supra note 29. This somewhat Marxist approach views the relationship between platform and users as a matter of subordination and exploitation. It assumes that power derives from control over the means of production, and since users inhabit a privately-owned infrastructure, they are subject to the authority of the owners. What complicates this picture, however, is the fact that the means of generating and distributing content also belong to the users. Servers, nodes and networks (and also interface and data) are owned by platforms and users alike.

Jeff Howe, for instance, introduced the term "crowdsourcing" to describe the outsourcing of jobs, traditionally performed by designated employees, to an undefined, generally large group of people in the form of an open call. See Howe, supra note 8.
of a unitary whole.”\textsuperscript{96} In some cases, such as in the case of \textit{sharing}, online collaboration lacks any such intention to contribute to a unitary whole as contributions are separate and independent. In other cases, however, such as that of Wikipedia, it is arguable that users intend to contribute to a unitary whole.\textsuperscript{97} These cases might be treated under copyright law as jointly authored, and therefore would be considered joint ownership.\textsuperscript{98} Yet joint ownership under copyright does not offer a useful framework for governing the output of large scale collaboration. Joint owners share equally the ownership of copyright, unless a contrary agreement is made. The rules related to co-ownership in copyright derive from co-ownership in tangible property.\textsuperscript{99} Each owner can act unilaterally and independently of the other co-owners.\textsuperscript{100} This does not mean that each contribution should be copyrighted to the individual user. The collaborative nature of such creative projects may weaken the claim of each individual user for exclusivity over the bits and pieces she contributed to a collaborative endeavor.

It is rather superficial to apply the legal constructs of \textit{joint authorship} and \textit{work-made-for-hire} to large-scale collaboration of the type that is taking place in the social web. These legal doctrines do not provide sufficient protection for the interests of collaborators in their joint work. Social production reflects a joint effort, but here value is created by the accumulated effort of a massive number of participants. Viewing the output of online collaboration as a single coherent work often fails to address the special nature of such collaboration: that it is a dynamic and interactive process. Social production creates new space for collectivity. The contributions of users that are facilitated online often reflect spontaneous expression and engagement with each other’s works by rating, tagging and commenting.

\textsuperscript{96} 17 U.S.C. § 101.

\textsuperscript{97} Hetcher argues that in those cases users’ contributions have an "overall value that is immeasurably greater than the sum of its parts," and such works should be treated under copyright law as jointly authored works, compilations, collective works, and works made for hire. \textit{See} Hetcher, \textit{supra} note 92, at 886.

\textsuperscript{98} 17 U.S.C. § 201(a).

\textsuperscript{99} \textit{See} 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 6.10(B) (2008).

\textsuperscript{100} Each co-owner may license any of the rights listed under the Copyright Act, without the consent of the other joint owners, provided that she shares any profits made from such licensing with the other co-owners. According to the House Report accompanying the 1976 Copyright Act, this meant that joint owners of a copyright each have "an independent right to use or license the use of a work, subject to a duty of accounting to the other co-owners for any profits." \textit{H.R. REP. NO. 94-1476}, at 121 (1976).
The output of such collaboration is actually more a reflection of an ongoing social process than of a commodity that can be owned and transferred.

2. Impediments to Collaboration

Copyright law not only fails to provide a proper toolkit for structuring the relationships among collaborators regarding their joint output, it may also erect barriers to creating new content through collaboration. This is due to the fact that essentially, copyright law offers exclusivity. The right to exclude is considered a core element of any property right and a defining feature which arguably makes intellectual property a type of property right. The exclusivity that comes with ownership, which was suitable for the content industry, does not fit a collaborative environment which requires coordination, cooperation and mutual accountability.

If the contribution of each user is considered copyrighted, participating users and social media platforms must take precautions to avoid any unauthorized use of users’ contributions which might be considered copyrighted. Any user who wishes to make use of a preexisting work must first acquire an appropriate — and often costly — license. The user must determine which license is necessary, identify the different copyright holder, negotiate a license to use the work and pay the license fee. The high cost involved in licensing erects barriers that often make it difficult for users to participate in generating content, especially in collaborative initiatives of volunteers that lack the fee structure and the organizational infrastructure which are necessary to maintain a licensing system. Copyright law does not leave sufficient room for users to work upon preexisting materials. Fair use privileges, which do protect some unlicensed transformative uses, are rather vague and indeterminate, exerting a chilling effect even in cases where a use is legitimate.

As a legal regime that creates a hierarchy between owners (who enjoy the power to exclude) and non-owners, copyright law conveys a normative message that may weaken social motivation. The proprietary norm shapes the relationships among the different players involved in collaboration.

102 Elkin-Koren, supra note 9.
Copyright law treats content as a commodity, and the use of content in a copyright regime is framed as a business transaction. The law focuses on the author as the center of the creation process and emphasizes her authority to determine the fate of her work. Social production, by contrast, is often generated as a type of communicative act, reflecting engagement in a conversation or an interaction with a community, which is ultimately merged into an information flow. Communicative acts reflect the social norms of sharing, participating and collaborating. When a user uploads a voiceover of a famous movie, she may be trying to communicate a message, using the available cultural language shared by her peers. These authors/users do not purchase the work, nor do they sell their added value. They simply interact and communicate with others. Shaping the relationship among users as a transaction and not as a conversation may undermine the social motivation. We have seen that social motivation depends on a sense of belonging to a community and on reciprocity. Exclusive rights over individual contributions may undermine the social cohesion and the sense of community which are both a byproduct of social production and the mechanism that keeps it alive.

To summarize, the individualistic focus on the sovereignty of the owner regarding the use of the work and the legal power to exclude others, which is the essence of the proprietary approach to copyright, may conflict with the fundamentals of social production. The proprietary emphasis on the sovereignty of owners further weakens social cohesion by emphasizing difference and disparities of interests rather than shared values and goals. This emphasis on the right of each owner in her respective contribution creates impediments to large-scale collaboration, as it gives each and every contributor the power to decide how their contribution will be exploited.

B. Encouraging Social Production in the Shadow of Copyright

The deficiencies of copyright in governing relationships related to social production induced the adoption of private ordering arrangements by communities of users/authors. Licenses, contracts and Term of Use (ToU) enable online communities to opt out of the standardized rights and duties applied by copyright and to establish a legal regime that fits their needs. A classic example is the General Public License (GPL) of the Free Software Foundation (FSF), which secures the freedom to run, edit and share software.

Collaborative production currently relies on two licensing strategies: one is modular and the other is standard. The modular strategy, used by Creative Commons, gives the author the power to decide how to use her content, by selecting a license that comes with the content. As I have argued elsewhere,
this modular licensing scheme leads to a plurality of licenses, compromising clarity and predictability.\footnote{Niva Elkin-Koren, Exploring Creative Commons: A Skeptical View of a Worthy Pursuit, in The Future of the Public Domain 325 (P. Bernt Hugenholtz & Lucie Guibault eds., 2006).} It often creates new barriers to the coordinated use of copyrighted works where licenses are sometimes incompatible with one another. A licensing strategy that leaves the power to decide on permissible uses to each individual licensor may fail to facilitate efficient coordination of large-scale collaborations, which require shared norms regarding the use and exploitation of content produced by the community.

Another licensing strategy, which promotes a single licensing standard, requires participants to enter a "social contract" — a list of permissible uses in a standardized ToU or the End-User License Agreement (EULA) — that applies to all the collaborating users and reflects their shared norms regarding the use of their contributions. This strategy enables the community of users/authors to agree upon a set of shared norms related to the exploitation of their contributions, individually and as a whole. Terms of use governing social production could be attached to any new contribution to the collaborative project (i.e., GPL) or posted and administered by the social media platform (i.e., Facebook, Wikimedia).

From the perspective of social production, such private ordering arrangements have an important advantage, as they allow communities to tailor the governance of content to fit the nature of collaboration, the group identity and the values shared by its members. At the same time, however, private ordering provides only a limited remedy to some of the deficiencies of copyright discussed above, as it suffers from several disadvantages. A major shortcoming of private ordering is that obtaining the consent of thousands of collaborators to a contract, and to any revision thereof, might be a very difficult (and costly) task. This process of collective action is a lot more difficult to achieve than simply coordinating the work of collaborators in creating new content. Collective action requires a procedure that would enable the group to reach decisions which are binding on the entire group of collaborators regarding the exploitation of the work. It is difficult to reach such agreement in large-scale collaboration where the parties are not bound together by any formal legal structure.\footnote{Viral licensing was, in fact, an innovative legal mechanism for facilitating entrance into this type of collective action, applying the license to any derivative work which is based on the original. See Creative Commons, Licenses, http://creativecommons.org/about/licenses/ (last visited Oct. 1, 2010) (Creative Commons Share Alike license); Free Software Foundation, GNU General Public License v2 s. 2(b), http://www.gnu.org/licenses/gpl.html (last visited Oct. 1, 2010).}
Moreover, once a consensus is reached, it is very difficult to move away from it. Since private ordering of social production relies on the copyright of each contributor, relicensing requires obtaining permission from all the contributors to the endeavor. For large-scale collaborations, any process of identifying the right-holders and getting their permission to relicense their content under different terms would be prohibitively costly and most likely unfeasible. This becomes a critical issue as there is a constant need to revise the terms of such licenses. That is because the online environment is dynamic and changes rapidly with new technological developments, new business models, and changes in circumstances and power relations.

Processes of license migration in social production are not only cumbersome and time-consuming but also difficult to achieve. Legally, every owner has to agree to license her content under new license terms. But every new license must also gain the legitimacy of the entire community of right holders. Practically, if contributors do not opt-in the new license becomes useless. In this respect, social production is fundamentally different from corporate production of content. Social production depends on the enduring contribution of users. If they cease to collaborate, the endeavor will dry out and the content will vanish.

One example of these difficulties is the migration to the GPLv3 administered by the Free Software Foundation. The draft of version 3 of the GNU General Public License (GPL) was released in January 2006, and the final version was finally released in June 2009, after a public consultation and a long and intensive consensus-building process within the Free Software and Open Source communities.106

Another example is Wikipedia license migration. The Wikimedia Foundation, the nonprofit organization that supports Wikipedia, was recently faced with the need to modify its license. Wikipedia entries used to be subject to the GFDL license, a GNU Free Documentation License that permits copying and distribution in any medium for either commercial or noncommercial purposes. The license imposed significant burdens on print distribution (like attaching the printed version of the license) and was incompatible with other free content licenses such as Creative Commons license.

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The migration to Creative Commons CC-BY-SA\textsuperscript{107} was legally complicated and somewhat controversial within the community. Legally, each Wikipedia contributor retains copyright in the content that they submit, and Wikimedia was therefore unable to unilaterally relicense the content under a different license. What enabled the migration to CC-BY-SA was the release of a revised version of the GFDL, which was jointly announced by the FSF and the Wikimedia Foundation and which explicitly authorized the relicensing of content posted on Massive Multi-author Collaboration (MMC) Sites for a limited time.\textsuperscript{108} Even though the amended version of the GFDL authorized Wikimedia to relicense under CC-BY-SA, it nevertheless brought this issue to a general vote and subsequently created dual-license for Wikipedia content so that it is available under both the GFDL and CC-BY-SA licenses.\textsuperscript{109}

ToU governing social production are also facilitated by the social media platform (i.e., Facebook, Wikimedia). Such ToU typically define ownership and license the use of content generated and shared through the platform. As I have argued elsewhere, the interest of platforms and the needs of participants in social production may coincide.\textsuperscript{110} The platform’s economic value derives from the network of users who create value. The viability of the platforms depends upon users’ ongoing contributions. In fact, there is no value in the platform other than the users who actively engage in it. In order to thrive, social media platforms must sustain an engaged community, encourage social motivation, and preserve loyalty and social commitment. Nevertheless, as mega platforms such as Facebook become more powerful,
there is a growing concern that they will rely on the copyright of collaborating users to gain dominance.

The downsides of private ordering suggest that collaborative production cannot be efficiently accommodated without some adjustments in copyright law. Copyright law should offer particular rules that would facilitate social production. Arguably, different communities have different needs and values; it would be difficult to come up with a single legal standard that fits all. If we want to encourage social motivation, we need to help individuals form communities and select the terms that fit their own preferences. To allow for a statutory yet flexible solution, copyright law might provide a set of default rules related to the collaborative production of content, helping groups coordinate not just the collaborative work but also the norms related to access and use of the output. These default rules should define fair procedures for opting in and out of a collaborative project and for amending the terms and conditions which apply to the content. Such default rules may facilitate social production by enabling individuals to form communities and negotiate norms on their own, without the assistance of intermediaries such as FSF or mega platforms.

C. Social Production and the Economic Justification of Copyright

The economic analysis of copyright law assumes that content producers are selfish, rational actors who maximize profits. Corporations are profit-maximizers and therefore require economic incentives to invest in the production of new content. Content is expensive to produce and inexpensive to copy. The marginal cost of copying is often zero. Therefore, economic theory would predict that informational works will be under-produced in the absence of copyright. Only copyright, it is assumed, can secure a return on the investment in the creation of content and therefore secure sufficient incentives to create. The high investment in production costs (of a novel, a news report, a television series or a movie) is recouped by selling copies at a monopoly price or licensing exclusive broadcast rights. The business models of mass media and the content industry are therefore based on exclusivity. This incentives paradigm was central for an economic reality where content was produced primarily by firms and for-profit organizations.

Social motivation, as explained above, is challenging this view of the creative environment and therefore the prevailing economic rationale of copyright law. In sharp contrast to the industrial model, individuals producing content in social contexts are driven by a wide range of social motivations. Social production is therefore less dependent on a firm business model that secures a financial return for each creative investment; it depends instead on
voluntary contributions by individuals, often large crowds of individuals, and on their continued engagement and enthusiasm. Consequently, legal scholars in recent years have been paying more attention to the non-monetary incentives that motivate creators to challenge the dominant view that monetary rewards are necessary and sufficient for inducing human creativity.111

The prevalence of social motivation introduces a new dimension to copyright policymaking. The rise of social production and the greater share of UGC in the overall content that is available to the public imply a shift in the balance mandated by the public good equation. The "public good" nature of creative works entails that copyright law must balance two contrary forces: the need to provide exclusive rights for incentivizing the creation of new works, and the need to minimize restrictions on access as a result of excessive copyright protection. Such limits on access to preexisting materials will hinder further creation and deny society the benefits of the copyright system. While monetary incentives were absolutely necessary to induce mass production by the content industries, the rise of social production suggests that other considerations should now be given more weight, namely, maximizing the use of (non-rivalrous) informational works.

III. CAN COPYRIGHT BE TAILORED TO SOCIAL PRODUCTION?

How can copyright law tilt the balance to facilitate social production? Proposing a detailed legal reform is beyond the scope of this Article. The following discussion therefore identifies some of the challenges to copyright law. Legal policies that seek to encourage social production should focus on three challenges: strengthening social motivation by securing a right to attribution; removing impediments to collaboration by explicitly permitting noncommercial use; and, most importantly, enabling individuals in large-scale collaboration to act together.

One issue is credit and attribution. Users often seek some recognition for their contributions. The evolvement of attribution as a requirement in the licenses offered by the Open Content Movement shows that attribution

is an important component of social motivation.\textsuperscript{112} In fact, attribution often substitutes for monetary compensation. Gaining credit, status and reputation could become financially beneficial as online reputation becomes the new currency of the Web. Credit and attribution may also be associated with the collaborative endeavor and reflect the desire of users to be associated with a group identity or a social movement. Legal policies that aim at promoting social motivation should therefore secure a right of authors/users to receive reasonable credit in contribution to social production. The challenge for copyright law is to develop some legal standards for evaluating attribution practices and the extent to which they provide fair credit to authors. At the same time, however, a right to attribution should not compromise free and open information flows and should therefore not be treated as a property right.

Another issue is noncommercial use. Social production is emerging alongside the industrial model. There are many clash points at the interface between commercial and noncommercial use. Participants in social production may sometimes seek to monetize their content.\textsuperscript{113} Users might also be using commercial content for noncommercial purposes. For instance, content produced by users sometimes is entwined with mass-produced content (i.e., a mashup of a homemade video clip and a popular song). Such incidents often incite lawsuits by right-holders against users.\textsuperscript{114} The legal right of owners to exclude the use of their materials by unlicensed users creates barriers to participation by individual users in social production. Since social production often lacks any business model, a license cannot be acquired. On the other hand, UGC is sometimes incorporated into new business models of commercial players (i.e., book reviews scraped for commercial use). In such instances, users might be required to protect their own works from commercial exploitation by others.

The mixture of commercial interests and social motivation may threaten the sustainability of social production.\textsuperscript{115} The blurred boundaries between commercial and noncommercial activities may jeopardize the attempt

\textsuperscript{112} Creative Commons made attribution a legal requirement which is included in all of their licenses. See Creative Commons, supra note 105; see also Catherine L. Fisk, *Credit Where It’s Due: The Law and Norms of Attribution*, 95 Geo. L.J. 49, 91 (2006) (“The experience of organizations devoted to a robust public domain suggests that even those devoted to minimizing intellectual property rights still insist on attribution.”).

\textsuperscript{113} See supra notes 59-64 and accompanying text.

\textsuperscript{114} See, e.g., Lenz v. Universal Music Corp., 572 F. Supp. 2d 1150, 1155-56 (N.D. Cal. 2008).

\textsuperscript{115} See supra notes 65-68 and accompanying text.
to maintain the noncommercial volunteering spirit of social production. This interface between commercial and noncommercial practices of social production therefore requires a legal switchboard which would allow producers of both commercial and noncommercial content to easily switch between the two contexts of creation and exploitation of creative materials. For this purpose, it is necessary to provide an explicit legal exemption for noncommercial personal use. Such an exemption may enable participants to shift more easily between an individualist-competitive approach and a communal-collaborative approach.

So far, the Supreme Court of the United States has failed to interpret the fair use doctrine as a general right of personal noncommercial use.\textsuperscript{116} Securing this right may therefore require amending the law by adding an explicit fair use exemption for private noncommercial use. Such an exemption should set clear, bright-line standards that would establish certainty and predictability regarding permissible uses.

A recent attempt to define the boundaries of noncommercial use is Litman’s proposal to exempt personal use. Litman argues that the bundle of rights of copyright owners should be limited to the right to exploit the work for extracting revenues and should not extend to personal use, namely the right of individuals to read, listen to or view the work. This line, she argues, lies at the distinction between the exploitation and enjoyment of copyrighted works. Personal use, namely a "use that an individual makes for herself, her family or her close friends," will generally be considered enjoyment and not exploitation, although there might be some difficult cases at the margins.\textsuperscript{117}

Online collaboration requires that users be able not only to view, read, and listen to content created by others, but also to use content actively by changing its form or context and sometimes incorporating it into their own work. Consequently, promoting social production would require that the

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\item[S117] Litman assumes that "[t]here’s broad consensus that even unauthorized enjoyment is not and should not be illegal unless it either crosses the line into exploitation or otherwise interferes with the copyright owners’ opportunities to exploit their works. The difficulty is in telling the difference." Jessica Litman, \textit{Lawful Personal Use}, 85 TEX. L. REV. 1871, 1908 (2007). Litman argues that we need to define commercial use narrowly enough and also avoid assuming the unlawfulness of personal use simply because it competes with a copyright owner’s plan to exploit the work. \textit{Id.}
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noncommercial personal use exemption also cover transformative use and the right to adapt a copyrighted work for personal noncommercial purposes. The challenge for copyright law is to develop some legal standards that would easily allow for a distinction between commercial and noncommercial use. In an environment where social production is increasingly intertwined with commercial interests, defining such clear standards may pose a complicated challenge.\textsuperscript{118}

The greatest challenge to copyright law in the age of social production, however, is how to balance the autonomy and sovereignty of the individual author/user on the one hand and the vested interest of each of the collaborating contributors in the joint work on the other hand. Online large-scale collaboration for creating informational works often generates an output that is greater than the sum of each individual contribution. Each contributor may have a vested interest not only in each of their individual contributions, but also in the output of their collaborative efforts as a whole. Users might be at liberty to remove their work from a particular collaborative project and transfer it to a different facility at their discretion. At the same time, however, collaborating users may rely heavily on the contributions of other users. Content provided by one user can easily be incorporated into the works of others or merged into a single output. I may own a photo which I post on Facebook. This photo, however, may become part of someone else’s profile or someone else’s original video clip. Denying access to such contributions may seriously compromise the interests of other collaborators. Yet the proprietary approach of copyright enables each contributor to claim rights over a concrete micro-contribution to the collaborative effort, and sometimes to veto the exercise of rights by others.

Legal policies for nurturing social motivation must respect the autonomy of users and their freedom to be social, but must also respect their freedom to opt out of the social creative scene. How can legal policy provide some protection for the interests of the group as a whole without abolishing individual freedom? Note that this is not a conflict between the private and the public. The social good requires protection, as it serves the needs of individual participants as social beings. Therefore the ownership interest of each contributor in her particular contribution should be subordinated to the interest of the community in the output as a whole. The copyright of each

\textsuperscript{118} For the complexity involved in distinguishing between commercial and noncommercial use, see the study by Creative Commons: Creative Commons, Defining "Noncommercial": A Study of How the Online Population Understands "Noncommercial Use" (Sept. 14, 2009), http://wiki.creativecommons.org/Defining_Noncommercial.
participant in large scale collaboration should therefore be weakened. Put differently, rather than a right to exclude, contributors may have a right to prevent exclusion by any particular author of the collaborative work and to freely use the contributions of others, on which they relied.

**CONCLUSION**

Our current laws address individuals who collaborate through market mechanisms and citizens who collaborate through the political system. But social production is neither a market nor a type of collective action. It therefore entails a different theoretical approach. The governance of social production in the online environment requires a sui generis approach that is designed to address the relationship among users, and between individual users and their community of collaborators.

What should a "social contract" among users who collaborate in generating online content look like? A legal arrangement which aims to address peer collaboration in generating original content must secure the unique interests of both individuals and groups. When the organizing unit of production is social interaction, then social interaction should also be the organizing unit for exploiting the works. Each of the users, however, might have an interest in the output of collaboration that is also worth protecting. Furthermore, social production entails that control over the output of a collaborative effort is not simply about the ability to economically exploit the work, but is also linked to non-monetary interests such as affiliation, identity, and a sense of belonging to a community. Therefore, the types of governance challenges which we face in the context of social production are located at the intersection of private and public law.