

## **Distributed Creativity on the Internet: A Theoretical Foundation for Online Creative Participation**

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Starting from the premise that a deeper understanding of creativity as a sociopsychological process is a valuable foundation for analyzing contemporary practices of online creative participation, this article aims to forge a much-needed link between creativity research and online participation. Applying the lens of distributed creativity and integrating literature from across disciplines, we examine the distributed nature of online creativity along three key dimensions: social, material, and temporal. By analyzing online creative participation along these interrelated dimensions, a more nuanced and complex portrait of online creativity emerges—one that is sensitive to both sociocultural and technological influences, as well as to the way these factors intersect in online spaces. We theorize that, while all creativity is distributed, online creativity is paradigmatic in this regard; therefore, studying it in this light allows us to achieve a richer understanding of not only online creative dynamics, but also of creative action as a whole.

*Keywords: creativity, online participation, new media, user-generated content*

With the growth and diversification of online participatory platforms, recent years have seen a significant proliferation of creative activity in online spaces. Indicators of this digital creativity boom include the rise of new forms of creative expression (Milner, 2016; Shifman, 2014), the cultural prominence of remixes and mashups (Sinnreich, 2010; Sonvilla-Weiss, 2010), and the success of creative crowdsourcing platforms (Brabham, 2010, 2013), among many others. Furthermore, beyond these vernacular expressions of digital creativity, professional artists are increasingly turning to the Internet as a locus for creative action and collaboration (Cornell & Halter, 2015; Literat, 2012; Tribe, Jana, & Grosenick, 2006), using it as a platform to create new media art and facilitate online artistic collaborations.

Jenkins (2006a) identifies three major trends that explain the participatory ethos of contemporary media cultures: the emergence of new technological tools that facilitate participatory activities, the increasing prominence of DIY approaches to media production, and an economic

environment encouraging the production and circulation of media across platforms. In digital spaces, the previously disparate categories of producer and consumer are merging in complex ways to form a whole new kind of cultural participant: the “produser” (Bruns, 2008). At the same time (and beyond individual creative participation), the collective dimension of these Internet-based practices is essential, as online creative platforms can facilitate the emergence of participatory cultures around shared interests and common creative pursuits (Ito et al., forthcoming; Jenkins et al., 2006).

This article starts from the premise that the study of creativity, and particularly distributed or sociocultural models of creativity, is vital for understanding online creative participation, and vice versa. Yet the link between the two is insufficiently explored, and—with a few significant exceptions, such as the body of research on computer-mediated brainstorming (e.g., Kerr & Murthy, 2004; Ziegler, Diehl, & Zijlstra, 2000) or group creativity in online settings (e.g., Aragon et al., 2009; Michinov & Primois, 2005)—there are few links between the literature on offline creativity and the literature on online participation. The current article aims to address this lack by forging a valuable connection between these two areas of study. As researchers positioned in separate but interrelated fields, we each bring our respective expertise in these different domains—online creative participation (e.g., Literat, 2012, 2016, 2017) and creativity research (e.g., Glăveanu, 2010, 2011, 2014)—with the goal of forging a symbiotic interdisciplinary collaboration.

The aim of this article is to theorize online creativity, suggesting a potential framework for understanding how creative processes might be different—or not—in online environments. Creativity is typically defined in psychology as the process leading to the emergence of new, original, and meaningful artifacts (see Runco & Jaeger, 2012). By examining the lines along which creative processes are distributed in both traditional and mediated contexts, we aim to identify the particularities of creative activity in the online environment. In a previous collaboration (Literat & Glăveanu, 2016), we posed five questions—who, where, when, how, and why—in regard to the specific example of crowdsourced art, attempting to parse what is different when comparing participatory art in online versus offline contexts. However, our aim here is broader and primarily theoretical in nature. Specifically, by drawing from multiple bodies of literature and applying the concept of distributed creativity to online participation, we examine the distribution of online creativity across three key dimensions: social, material, and temporal. In doing so, we aim to identify and analyze the new kinds of behaviors, processes, and collaborations that the Internet has made possible, as well as some of the main challenges that are specific to Internet-based creative participation. We do not discuss one particular case study in depth; rather, by integrating multiple bodies of research and cross-disciplinary examples, we hope that this article can pave the way for future investigations of online creativity across domains of activity and provide researchers—across areas of inquiry—with a valuable toolkit to analyze these sociocultural processes in all their complexity.

### **Distributed Creativity and New Media Technologies**

Before engaging in an analysis of the particularities of online creativity, it is useful to reflect on why digital media and communication researchers (with some notable exceptions; see Negus & Pickering, 2004) have rarely engaged with creativity theories—a growing field of research, particularly in psychology (Kaufman & Sternberg, 2010). While the terms “creative” and “creativity” are often used, their meaning is

usually taken for granted and there is rarely a theoretical model of creativity underpinning digital media studies in this area. The main reason for this, we believe, rests in the fact that creativity has been conceptualized historically as an individual, psychological function that has little to do with social relations or material, technological engagement (Glăveanu, 2010, 2014). While other people and existing tools or technologies are considered to play a part in shaping an individual's creative expression, they are usually seen as "intervening" from the outside rather than being integral to the creative process.

However, there is another approach to creativity studies within the field of psychology: one that recognizes it as a systemic, distributed phenomenon taking place at the intersection between creators, their audiences, and cultural artifacts (Csikszentmihalyi, 1988; Glăveanu, 2011; Moran & John-Steiner, 2003). This perspective understands creative thinking in terms of interaction and promotes a distributed view of creativity as a process taking place between people, or between people and objects, and across time (Glăveanu, 2014; Sawyer & Dezutter, 2009). According to this perspective, all creativity is essentially distributed or collaborative, even when enacted by individuals working alone. This is because people create based on the ideas of others, working with tools made by others, and, most of all, addressing a variety of audiences as part of their creative work. Distributed creativity is thus a new, emerging paradigm that challenges individualistic perspectives and postulates creativity as a *social, dialogical, and cultural process*.

In essence, the notion of distributed creativity makes us pay particular attention to context (social and material) and the way this context participates in creative action. Contextual elements do not only facilitate or give meaning to creativity, but become part of it. Think, for example, about the multiple networks creators belong to, or the numerous tools and technologies they use to create; these are not external to the act of creating but effectively (co)constitute creative action. Distributed creativity considers the social and material context as part and parcel of creative processes and, consequently, any substantial change in the relation between creators and their audiences and tools is bound to change the way creativity is performed, as well as its outcomes.

One of the biggest transformations in the way we relate to our world is undoubtedly represented by the rapid penetration of new media technologies in all aspects of everyday life. The significant effects of these processes on creativity are materialized in new types of creative products and mediums of creative expression (e.g., Milner, 2016; Tribe, Jana, & Grosenick, 2006), as well as in shifting relations among creators and between creators and audiences (e.g., Feng & Literat, 2017; Jenkins, 2006b; Jenkins, Ford, & Greene, 2013). Our interest here is in explicating the ways in which theories of distributed creativity might help us achieve a deeper understanding of these mediated processes in all their complexity.

Creative action is distributed along a *social, material, and temporal* line (for a similar argument about cognition, see Hutchins, 2000). This means that creative processes take place not *inside* isolated minds (although individual cognition certainly plays a key part) but rather *in between* people, objects, and across time. In effect, the theory of distributed creativity considers this phenomenon in terms of interactions, communication, and co-creation (see Glăveanu, 2014). The *social* distribution of creativity points us to the system of bidirectional relations between creators and their audiences, in which ideas and perspectives are exchanged and differences are turned into resources for creative expression. The

*material* line of distribution concerns ongoing interactions with objects, tools, and settings and the use and transformation of their affordances (or action potentials) for creative purposes. Last but not least, both the social and material dimensions of this phenomenon need to be understood as evolving. Along a *temporal* line, the timescale of creative action ranges from microgenetic (i.e., the moment-to-moment interactions and exchanges that constitute, for example, the practice of online creativity), to ontogenetic (i.e., the life-course changes that shape the way people participate in creative action) and sociogenetic (i.e., the macrolevel evolution of society and technology, which offers a greater, dynamic frame for the other two temporal lines). These temporalities are, of course, intertwined, and a developmental perspective on creative action needs to account for each one of these levels and the ways in which they are embedded within each other.

In what follows, we apply this framework of distributed creativity to online creative action. Unpacking the processes of online creativity using this model is highly suitable within this context, as online spaces involve the interactions of multiple users and audiences, make use of sociocultural and technological affordances, and unfold within specific micro-, meso-, and macrolevel timeframes that are all relevant for understanding online creative participation. We present these arguments in a schematic form in Table 1, and discuss them, in turn, below.

### **The Social Distribution of Online Creativity**

Creativity is a fundamentally collaborative process (Barron, 1999), even when the collaborations that lead to the emergence of the new are less visible or explicit. As Google Scholar reminds us, using a popular expression, we are all standing on the shoulders of giants; this means not only that we use existing knowledge, but that we are constantly in dialogue with it, and with the ideas of others—the multiple audiences we address through our creative activity. Creativity is a dialogical process (Ness & Glăveanu, forthcoming) in the sense that it always relates—combines, differentiates, and ultimately integrates—different voices or perspectives. Even when creating seemingly alone, we are not in an asocial state because we still engage with the views of (absent) others.

Although all creative action—online and offline—is, as described above, social or dialogical in nature, online environments take this element of sociality to a new level. Online creativity is fundamentally networked, with the audience—actual or projected (Brake, 2012), active or passive (Campbell et al., 2016)—playing a crucial role in terms of fueling and sustaining creative action (see, for instance, Brabham, 2010; Danet, 2012; Stern, 2008; van Dijk, 2014). In this sense, as both theoretical and empirical research has shown, digital creative practices function as both creativity and communication; they fulfill both aesthetic and communicative functions, which are quintessentially intertwined (Danet, 2012; van Dijk, 2014). However, as Brake (2012) suggests, the relationship between online content creators and their audiences is complicated and resists generalization; he also notes that the existing literature in this area often suggests contradictory conclusions, and content creators themselves point to a range of shifting relationships with—and imaginings of—their audiences. Claiming that creativity is fundamentally a social process doesn't mean romanticizing social interaction; indeed, research conducted both online and offline shows that working in groups can be detrimental for creative achievement (see Paulus & Nijstad, 2003). The distributed understanding of online creativity simply makes

us aware of the fact that there is always a social relation—e.g., between producer and audience, or between producer and other producers—involved in creative production online, even when these social elements might not be readily apparent.

In many cases, however, the social and collaborative elements of online creativity are indeed explicit, as the affordances of online environments often make collaboration easier, and open up novel possibilities for collaborative relations and processes. The asynchronous nature of participation in online creative platforms makes processes of collaboration and evaluation more efficient and convenient, as Campbell et al. (2016) have found in looking at online fanfiction communities. Moreover, given the increasing use of mobile devices for online participation, creators can engage with each other and their audiences largely unrestrained by temporal or locative barriers, while the time required to retrieve information or communicate with collaborators is greatly reduced. We say “largely” because, of course, certain limitations and gaps in access and participation remain (Hargittai & Walejko, 2008; Jenkins et al., 2006).

The social distribution of online creativity is also apparent in the link between combinatorial creativity and online remix culture. Conceptual combination is often considered one of the most basic creative processes (Ward, 2001), as it refers to the fact that, in creativity, existing elements (e.g., ideas, types of knowledge, objects) are combined in order to generate new outcomes (e.g., a new idea that integrates previous ones or moves them in a novel direction). This general process of creativity is certainly present in the online world where creativity is quintessentially combinatorial; memes, remixes, and other digitally native creative forms are powerful examples of this combinatorial nature. Indeed, one of the key features of the online environment is the unprecedented number of elements available for creative action (and reaction) and their relative availability. Many online spaces and tools are dedicated to enhancing the combinatorial dynamic of creativity—fanfiction communities (Campbell et al., 2016; Curwood, Magnifico & Lammers, 2013), specialized remix sites like CCMixer (Jarvenpaa & Lang, 2011), or tools like memegenerator.com are clear examples—but even mainstream social media platforms like Twitter provide support for combinatorial and participatory ethos (Seneviratne & Monroy-Hernández, 2010).

A last important dimension of social distribution concerns evaluation. While many new ideas are potentially “creative,” they become so only when subjected to the views of others (Csikszentmihalyi, 1988). Creative participation in online spaces illustrates the social and collective nature of evaluation, as well as its internal (and integral) rather than external role in the creative process. In view of their highly participatory nature, online environments permit not only a distributed generation process but also collective forms of evaluation or exploration. Frequently, these evaluative processes are embedded in the technological design of online social spaces: For instance, the number of likes, upvotes, shares, or comments a creative artifact receives, or the level of popularity a meme enjoys in online spaces, function as indicators of value (Literat & van den Berg, 2017). However, these evaluation processes are often collectively crafted through more conversational processes of vernacular criticism—as in Literat & van den Berg’s (2017) study of the MemeEconomy community on Reddit, which appropriates stock-market lingo to discuss the value of Internet memes.

**Table 1. The Social, Material and Temporal Distribution of Creative Action and Its Expression in Online Spaces.**

<b>Creativity as distributed along a...</b>	<b>Principle of distributed creativity</b>	<b>Expression in online spaces</b>
Social dimension	Creativity, even when enacted by an individual acting alone, is a fundamentally social practice	<ul style="list-style-type: none"> <li>- online environments bring the sociality of creative activity to the fore</li> <li>- audiences play a crucial role in terms of fueling and sustaining creative action</li> </ul>
	Creativity lends itself to collaboration	<ul style="list-style-type: none"> <li>- online participation makes collaboration easier, and new forms of collaboration possible</li> <li>- combinatorial creativity thrives in online environments</li> </ul>
	Evaluation is social too, and an integral part of creativity	<ul style="list-style-type: none"> <li>- online creativity illustrates the social nature of evaluation</li> <li>- online participants move seamlessly from creator to evaluator and vice versa</li> </ul>
Material dimension	Creativity has an important material aspect	<ul style="list-style-type: none"> <li>- online, there are multiplied and diversified places for creativity</li> <li>- creative participation online is fundamentally site-specific</li> </ul>
	The material support for creativity both facilitates and constrains creative action	<ul style="list-style-type: none"> <li>- technological affordances, in combination with norms of participation, facilitate and constrain creative action</li> <li>- both social and technical factors shape the intensity of creative engagement</li> </ul>
	Beyond the materiality of creativity itself, the broader context of creative action matters	<ul style="list-style-type: none"> <li>- online participation is commodified, and conditioned by technical protocols, ownership models, and business interests</li> <li>- taking into account the political economy of online creative spaces is crucial</li> </ul>
Temporal dimension	At a micro level, creativity depends on a succession of stages	<ul style="list-style-type: none"> <li>- online creativity tools provide crucial support for nonlinear, iterative models of the creative process</li> <li>- however, the durability of online content and platforms also matters</li> </ul>
	At a meso (ontogenetic) level, creativity is inscribed into the life-trajectory of the individual	<ul style="list-style-type: none"> <li>- creative activity is more integrated within everyday life</li> <li>- creators begin to produce and share online at increasingly young ages</li> </ul>
	At a macro (sociogenetic) level, creativity depends on the accumulation and transformation of creative artifacts and processes at the level of society	<ul style="list-style-type: none"> <li>- online participatory practices have evolved significantly in the relatively short lifespan of the Internet</li> <li>- as technology evolves, so does the practice, and understandings of, creativity</li> </ul>

Furthermore, it is important to note that in online participatory cultures, roles and responsibilities are not clearly separated, and participants move seamlessly from creator to evaluator and vice versa, demonstrating the strong social link between creative and evaluative processes. For instance, van Dijk (2014) notes how participants in online interactive fiction communities fulfill both generative and evaluative functions, being at once authors, critics, and audience members. Campbell et al. (2016) made similar observations about fan fiction communities, suggesting that the processes of “distributed mentorship” that characterize creative production in these spaces are unique to online communities. Specifically, the authors note that seven key attributes—i.e., *aggregation*, *accretion*, *acceleration*, *abundance*, *availability*, *asynchronicity*, and *affect*—distinguish these forms of feedback and evaluation from traditional offline equivalents; all of these attributes have to do with sociality and communication. Such forms of collective evaluation shape the creative process by making it open to the views of others from early on, including during the process of making. Although, arguably, the possibility of peer feedback and evaluation in online spaces might inhibit online creativity (especially if that feedback is negative), empirical research suggests a largely positive relationship between evaluation and creative production, as community feedback has been found to represent a strong motivator that attracts and sustains participation (Campbell et al., 2016; Curwood, Magnifico & Lammers, 2013; Stern, 2008), again highlighting the salience of social dimensions in regards to online creativity.

### **The Material Distribution of Online Creativity**

Creativity is often studied by psychologists as a mental process rather than (equally) material and embodied one. This, for example, is why the metaphor of the lightbulb is so commonly used to depict this phenomenon: It designates the moment of creative insight or discovery. However, it says nothing about what happens before or after this “moment” or how the sociomaterial context plays a part in instances of what Wallas (1926) called illumination. A distributed view of creativity pays attention not only to the materiality of creative action but to the medium that connects individuals and their creative products.

In this regard, physical and online mediums can be said to have quite distinct qualities. As a locus of creativity, the Internet has a nebulous quality. While online spaces do have material culture, this materiality is constantly questioned and often difficult to identify (Lehdonvirta, 2010). Indeed, as Josephine Berry Slater asks, “where is an artwork when it’s on the Internet?” (Berry Slater et al., 2015, p. 415). Extrapolating to wider categories of online creativity, we might ask, where does a creative product “live” on the Internet?

The material distribution of creative action does not imply that the outcomes of creativity themselves need be material. Creativity, as a process, leads to the production of not only objects but first and foremost new processes, events, and performances (Sawyer, 2011). However, creative action, both offline and online, requires material support and depends on exploiting the multiple affordances of the environment. The notion of affordance is crucial for unpacking material distribution. A concept stemming from the ecological psychology of perception developed by Gibson (1986), affordances designate the potentialities for action offered by the physical or virtual environment. The use of technology mediates these potentialities but so, too, do interactions with other people who can point the user towards noticing

existing affordances or making better use of them; indeed, higher-level creativity is marked by the use of existing affordances in a different or unusual way.

The products of online creativity are no less dependent on material support; although “virtual,” their form is not abstract or acontextual. In this sense, it is important to remember that, in spite of the sometimes messy circulation of creative works on the Internet—across sites, platforms, communities, according to the unsystematic flows of sharing, forwarding, remixing, and so forth—creativity on the Internet is very site-specific. In other words, online creative spaces have idiosyncratic norms, contexts, ethos, and—significantly—specific technical affordances that may enable, encourage, or constrain particular types of creative participation (Baym, 2010; Papacharissi, 2010; van Dijck, 2013), or hybrid uses born “out of the confrontation of users and technical systems” (Feenberg, 2008). Online creativity does not unfold in an abstract space; it engages at all times with the specificity of online spaces and their constraints in ways similar to how offline creators relate to the constraints of their material environment.

Moreover, it is crucial to acknowledge that not all creative participation in online spaces is the same: The structure of the creative project or activity—both social and technical (see Literat, 2017)—determines the degree or level of engagement. Online participation, including creative participation, is often described in a very general manner and used as a blanket term, which does not allow for a complex and incisive assessment of the participatory process (Jenkins & Carpentier, 2013; Kelty, 2012; van Dijck, 2009). Instead, Literat (2012) suggests a more nuanced model of understanding the various levels of engagement, resting on a crucial distinction between executory participation (a task-based contribution to a predesigned project) and structural participation (having an actual say in the conceptual design of the project and exercising structural agency). Thus, when analyzing creative participation in online spaces, it is imperative that scholars account for these distinctions and examine the structure of the project or platform in terms of the kind(s) of participation it invites or, conversely, discourages.

Acknowledging the intrinsic materiality of online creativity also goes beyond the work setting and looks towards the broader context of the creators and the society they live in. In this sense, it is crucial to account for the political economy of online creative spaces as well. Scholars have been pointing to the ways in which corporations and other commercial interests exercise control over online creative spaces and thereby shape the types of creative action that can take place (Elder-Vass, 2016; Jenkins, 2006b; Jenkins, Ford & Greene, 2013; van Dijck, 2013). As the Internet is becoming increasingly “platformized” (Helmond, 2015), participation is commodified, and conditioned by technical protocols, ownership models, and business interests (van Dijck, 2013). Writing on fandom and participatory cultures, Jenkins (2006a, 2006b) has drawn attention to the ways in which companies have tried to combat, punish, or misconstrue grassroots participation, such as fans’ online creative activities. Although such efforts are incongruent with the principles of participatory culture and, as Jenkins, Ford, and Greene (2013) argue, ultimately unproductive in “a ‘spreadable media’ landscape,” they have often succeeded in limiting online creative engagement on particular platforms and around particular cultural texts. Importantly, as Elder-Vass (2016) notes, the “appropriative practices” of digital economies (such as YouTube, which Elder-Vass employs as a case study) “significantly, systematically and more or less directly influence the allocation of the benefits of production” (p. 102)—another reason why the political economy and larger commercial dimensions of online creative participation are vital to consider vis-a-vis the loci of creative action.

### **The Temporal Distribution of Online Creativity**

The sections above focused, in turn, on the sociality and materiality of distributed online creativity. However, the particularities of online environments are also evident when it comes to the temporality of creative action. Almost a century ago, at the beginning of research into (particularly eminent) creativity, it was common to assume distinct phases of creative work, such as preparation, incubation, illumination, and verification (Wallas, 1926). Later developments within creative cognition complexified these early perspectives and emphasized the circularity and numerous overlaps between phases and processes of creativity (Lubart, 2001). Online creativity and participation provide crucial support for nonlinear, iterative models of the creative process.

Practices of distributed creativity in online spaces support these nonlinear approaches by showing that the temporal dynamic of creating is defined by multiplicity, back-and-forth movements, and the possibility to revisit and redefine one's work. Online creative coding communities such as Scratch (Resnick et al., 2009) or open source software communities (Lakhani & von Hippel, 2003; von Hippel, 2001), which are built around iteration, debugging, and collaboration, are illustrative examples of this multiplicity and nonlinearity. Of course, the question of permanence is crucial here as well, since online content is often shifting or ephemeral. For instance, SalahEldeen and Nelson (2012) estimate based on their empirical research that around 11% of content shared on social media will be lost after the first year, with a projected loss of 0.02% per day after that. Online creative content also poses the challenge of preservation, as its very existence and accessibility depends on a series of technical and infrastructural protocols that change at an increasingly accelerated pace. For instance, many works of early Internet art are now inaccessible (Tribe, Jana & Grosenick, 2006). The faster the technology develops, the shorter the potential lifespan of digital creative content (Cornell & Halter, 2015), underscoring the significance of recent initiatives like the Library of Congress's web archiving project, which preserve GIFs, memes, webcomics, and other creative online artifacts that might have been lost with the passage of time (Voon, 2017).

The examples above illustrate the temporal dynamics of creativity at a micro level, marked by the continuous transformation and renewal of online material. However, the temporal distribution of creative action needs to be understood at other levels as well, including the life trajectory of the person(s) doing the creating (meso level) and the societal evolution of technology and participation (macro level). When it comes to the former, the fact that we can engage in online participation at almost any time—provided we have online access—further integrates creative activity into everyday life. Thus, in stark contrast to the metaphor of the arts as a reservation (Gross, 1995), creativity today is not thought of as a separate domain of activity or a special event. This blending might on the one hand make us less sensitive to the creativity involved in online participation, and on the other, might resonate across other domains of our personal and professional lives. Furthermore, as Jenkins and Bertozzi (2008) argue, this integration of creativity into everyday life is particularly relevant in the case of youth, who make seamless connections between creative action and other social and quotidian activities. And indeed, from an ontogenetic perspective, another important particularity of online creativity is the fact that, aided by the accessibility of digital tools and the appeal of online affinity networks, people begin to produce and distribute creative material at increasingly young ages (Ito et al., forthcoming).

In relation to the macrolevel temporal distribution of creativity—that is, societal expressions of online creativity over time—we need to consider the rapid evolution of technology and its impact on creative participation. In terms of both ethos and actual operation, the Internet has certainly evolved from its early vision (Mayo & Newcomb, 2009) and continues to do so. Therefore, on a macro temporal level, the increasing reliance on software for creative use will necessarily shape the concept of creativity over time (McCormack & d’Inverno, 2012). For instance, as software evolves, can we or should we start thinking about autonomous (or automated) creativity? Can we consider artificial intelligence as creative (Dorin & Korb, 2012)? While these developments will certainly impact how we work creatively and collaborate online, technology alone cannot determine either; indeed, applying the notion of distributed creativity in online spaces emphasizes the fact that there are many other interconnected elements to consider, and that creativity is shaped by—and within—these relationships, rather than by people or technology taken separately. At the same time, looking ahead, both our practices of creating and our understanding of creativity will continue to be shaped by macrolevel sociotechnological changes. Current and future sociotechnological shifts will require a constant reassessment and redefinition of creativity, a concept that itself has never been static, but repeatedly transformed by ongoing societal debates (Hanchett Hanson, 2015). Arguably, this historical process will continue a rapprochement between creativity and new media that could see the meaning of one depend on the meaning we give the other.

### **Conclusion**

As Halter (2015) aptly notes, “the Internet has altered how we relate to ideas—how we discover them, how we distribute them, how they circulate through society, how they are hidden or revealed” (p. 233). Acknowledging the significance of this new sociotechnological context, our aim in this article was to marshal relevant tenets of creativity research in service of an examination of the particularities of online creative participation. In the process, we also aimed to strengthen the insufficiently theorized connection between creativity research and online participation. To do so, we applied the framework of distributed creativity—which emphasizes the importance of context for creative action—in order to analyze the social, material, and temporal distribution of online creativity and thereby achieve a more nuanced understanding of online creative action across multiple interlocking dimensions. The key takeaway from this examination is that, while all creativity is essentially distributed, online creativity is paradigmatic in this regard; thus, by adopting a distributed framework and applying it to online contexts, we can not only reach new understandings about online creativity but also shed new light on creative action as a whole.

To be sure, there are certain limitations when it comes to the very question of what is special or different about online creativity, or the attempt to understand online creativity as a particular incarnation of creative action. Asking the question in this manner presupposes, to an extent, that there is an objective “nature” of creativity that varies across contexts. However, the epistemological underpinnings of distributed creativity go against such a reifying ontology. Creativity is constituted not only by creative practices (i.e., what creators do) but also by discourses about creativity (i.e., how creators and their audiences construct representations about what is done). The construction of digital creativity, both in science and lay representations, revolves around notions of collaboration, interaction, and co-creation. This is a substantial shift in discourse compared to more traditional discourses of (nondigital) creativity, which emphasize individuals and individual minds. In fact, it is precisely the emergence and growth of

digital technologies that contributed to new, systemic ways of thinking and talking about creativity (see the transition between the “I” and “We” paradigms of creativity; Glăveanu, 2010). Following the social constructivist logic that permeates our own investigation, it is also important to remember that practices and discourses are not disconnected but feed into and constitute each other, just as there is a continuous blending today between our online and offline activities. The way we think and talk about creativity is not separate but integral to what we do, when we act creatively, and how.

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