

The Work of Art in the Age of Mediated Participation: Crowdsourced Art and Collective Creativity

IOANA LITERAT
University of Southern California

Online crowdsourced art is the practice of using the Internet as a participatory platform to directly engage the public in the creation of visual, musical, literary, or dramatic artwork, with the goal of showcasing the relationship between the collective imagination and the individual artistic sensibilities of its participants. Discussing key examples and analyzing this artistic practice within multiple theoretical frameworks, this article fills a critical gap in the study of contemporary art and participatory culture by developing a typology of online crowdsourced art and exploring the levels of artistic participation. In view of its reliance on the artistic contribution of a large pool of geographically disperse participants, this type of art raises important questions about notions of collective creativity, authorship, and the aesthetic significance of digital participation.

The Work of Art in the Age of Mediated Participation: Crowdsourced Art and Collective Creativity

With the advent of digital participation and its alluring promise of widespread engagement and global interconnectedness, a cultural shift has taken place in traditional notions of authorship, creativity, and individual expression. This shift has been apparent in fields such as business, entrepreneurship, entertainment, journalism, but also in the arts. As companies realized the generative potential of networked online communities, the practice of crowdsourcing became a profitable and efficient strategy of harnessing these communities' knowledge and creativity to create content, solve problems, and effectively perform corporate research and development tasks (Howe, 2006a). Beyond these corporate contexts, the unique affordances of the Internet as a platform for reaching a global community of potential content generators also has stimulated the rise of an impressive number of successful online ventures built exclusively on the phenomenon of crowdsourcing: YouTube, iStockphoto, and Threadless are only a few of the most prominent examples. Reflecting these social and cultural trends in content generation, the arts soon followed suit, and the practice of online crowdsourced art emerged as a significant development across the entire artistic spectrum, from visual arts to music to creative writing.

Ioana Literat: iliterat@usc.edu

Date submitted: 2012–01–23

Copyright © 2012 (Ioana Literat). Licensed under the Creative Commons Attribution Non-commercial No Derivatives (by-nc-nd). Available at <http://ijoc.org>.

In the words of Jeff Howe (2006b), the *Wired* columnist who coined this term in June 2006, “crowdsourcing represents the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call” (para. 5). The vital elements that qualify an outreach strategy as crowdsourcing are, according to Howe, the use of the open call format and the reliance on a large network of potential workers. Although in some cases there is a material reward for the best contributions, the existence of financial incentives is not a required feature in crowdsourcing. Because of the diversity of its applications, crowdsourcing continues to be a disputed term in both the scholarly literature and the popular press; Howe’s original definition is, in this sense, a helpful delineation of its practical sphere.

The value of crowdsourcing lies in the collective intelligence of the contributors. Pierre Levy (1997) describes this concept as “a form of universally distributed intelligence, constantly enhanced, coordinated in real time, and resulting in the effective mobilization of skills” (p. 13). The question of collective intelligence—and its potential efficiency in various practical settings—has received much attention in both academia and journalism. Researchers studying team performance generally agree that, under the right circumstances and with appropriate motivation, large groups of people can work together and harness their collective intelligence to achieve efficient results (Benkler, 2006; Rheingold, 2002; Surowiecki, 2004). Nevertheless, artistic creativity is different from innovation and intelligence, and it requires a unique set of skills and sensibilities as well as a particular type of cultural capital; if we admit that crowds can have collective intelligence, do they also have collective creativity in an artistic sense?

As illustrated by the historical background of participatory art, the idea of integrating the creative input of the “crowd” into the artistic process is by no means new. Whereas the Happenings of the 1960s and 1970s or the conceptual art in modern gallery exhibitions made it possible for a small audience to participate—always dependent on their physical presence at the site of production or exhibition—the rise of Web 2.0 enabled the extension of this invitation for creative input to a global community of potential participants. Thus, the integration of crowdsourcing into the process of artistic production, while an innovative practice, is also a foreseeable outgrowth of recent trends in culture and art coupled with the emergence of a feasible platform that could make this collaboration possible. However, in view of its reliance on the artistic contribution of a large pool of usually anonymous participants, this type of art raises important questions about notions of collective creativity, authorship, collaboration, and the shifting structure of artistic production in the new digital environment.

Despite its timeliness and cultural significance, the phenomenon of online crowdsourced art has received little attention from researchers or art historians. Indeed, a comprehensive literature review indicates that research in this area is critically absent. This lacuna is particularly striking in comparison to the wealth of literature on the commercial applications of crowdsourcing across a wide variety of domains. At the same time, there is an urgent need to situate this practice within the larger literature of participatory art and to engage the features of crowdsourced art in relation to similar artistic tropes—primarily, relational aesthetics and social practice—as a way to better define and understand its sociocultural position.

This article therefore aims to fill these critical gaps by analyzing the practice of online crowdsourced art within a framework of collective creativity and participation theories. Principally, my interest is in answering two key questions. What is crowdsourced art and how can it be classified? And how does the structure of the artwork determine the degree or significance of participation? Through key examples and negative case analysis, this investigation develops a typology of online crowdsourced art, which then facilitates a formal exploration of the levels of artistic participation, qualifying user engagement according to the structural features of the artwork. Through this formal understanding, the article concludes with a social critique of the latent power structures within online crowdsourced art. By exploring the artistic, cultural, and moral impact of this new practice, this study maps out this uncharted territory and provides key insights into current and future trends shaping the conceptualization and production of collaborative artwork.

Online Crowdsourced Art: Cases and Typology

Online crowdsourced art is understood as the practice of using the Internet as a participatory platform to directly engage the public in the creation of visual, musical, literary, or dramatic artwork with the goal of showcasing the relationship between the collective imagination and the individual artistic sensibilities of its participants. Although artistic participation is enabled by—and dependent upon—Web access, this artistic strategy is significantly different from other types of digital art such as individually created net art or data visualization, since it relies on the collective input of a large pool of contributors in the form of an open call—the same characteristics that represent the two principal features of crowdsourcing.

To better understand the scope of online crowdsourced art, let us turn to a few paradigmatic examples of this artistic practice. Within the field of visual arts, digital artist Aaron Koblin—who is also creative director of Google's Data Arts Team in San Francisco—is, arguably, the lead innovator in online crowdsourced art. Explicitly referencing the connection between art and crowdsourcing, Koblin often uses Amazon's crowdsourcing marketplace Mechanical Turk (www.mturk.com) to post creative "tasks" that online workers can perform in exchange for a small fee. His most famous project, *The Sheep Market* (www.thesheepmarket.com), paid workers on Mechanical Turk \$0.02 to "draw a sheep facing to the left," aggregating 10,000 examples of user-drawn sheep. Similarly, Koblin's *Ten Thousand Cents* (www.tenthousandcents.com) paid Mechanical Turk users 1 cent to paint a tiny part of a \$100 bill, working in isolation from each other and without knowledge of the final task. The total labor cost to create the image of the bill as well as the reproductions available for purchase was \$100. Koblin also has ventured in the collective creation of an animated music video. His excellent *Johnny Cash Project* (www.thejohnnycashproject.com), a collaboration with director Chris Milk, invites participants to create a drawing that is then woven into a collective musical tribute to Johnny Cash, set to Cash's final studio recording, "Ain't No Grave." Made using a custom drawing tool on the project website, each participant's drawing represents one frame in the animated music video. The interactive website allows visitors to see the collective end product and to inspect individual contributions frame by frame. The number and diversity of contributions so far has been impressive, and the result is a moving global homage to the beloved artist.



Video Clip 1. A video overview of Aaron Koblin and Chris Milk's *The Johnny Cash Project* (2010), including the final music video drawn by contributors.

Koblin's most recent crowdsourced art project is the aptly named *This Exquisite Forest* (www.exquisiteforest.com), a collaboration with Chris Milk, the Tate Modern, and Google Creative Lab. The project invites online visitors to create short animations that build off one another, resulting in a collection of branching narratives that—visually and poetically—resemble trees in a forest. An example of the increasing penetration of online crowdsourced art projects within more traditional and institutionalized spaces of art exhibition, *This Exquisite Forest* has been displayed at the Tate Modern in London for 6 months in 2012.

Other notable visual arts projects in the field of online crowdsourced art have been *SwarmSketch*, *Wikipainting*, and *Learning to Love You More (LTYM)*. Each week, *SwarmSketch* (www.swarmsketch.com) randomly chooses a popular Internet search term, which becomes the sketch subject for the week. Visitors can contribute one line to the group illustration and vote on which lines will remain and which lines will be eliminated. *Wikipainting* (www.wikipainting.free.fr) is similarly based on the idea of collaborative painting, but gives participants free rein in terms of content and allows anyone to modify the publicly available source code and thus improve the painting applet. *Learning to Love You More* (www.learningtoloveyoumore.com) is a collaboration between artists Miranda July and Harrell Fletcher (see Figure 1). Every week, the artists issued a call for participation in the form of a school-type "assignment" such as "Take a picture of your parents kissing," "Draw the news," "Recreate an object from

someone's past," "Draw a constellation from someone's freckles," or even the meta-assignment to "Make a LTYM assignment." The participants submit their "reports" in the form of writing, drawings, photograph, or video, and all the contributions are uploaded to the project site under the heading of each weekly assignment.

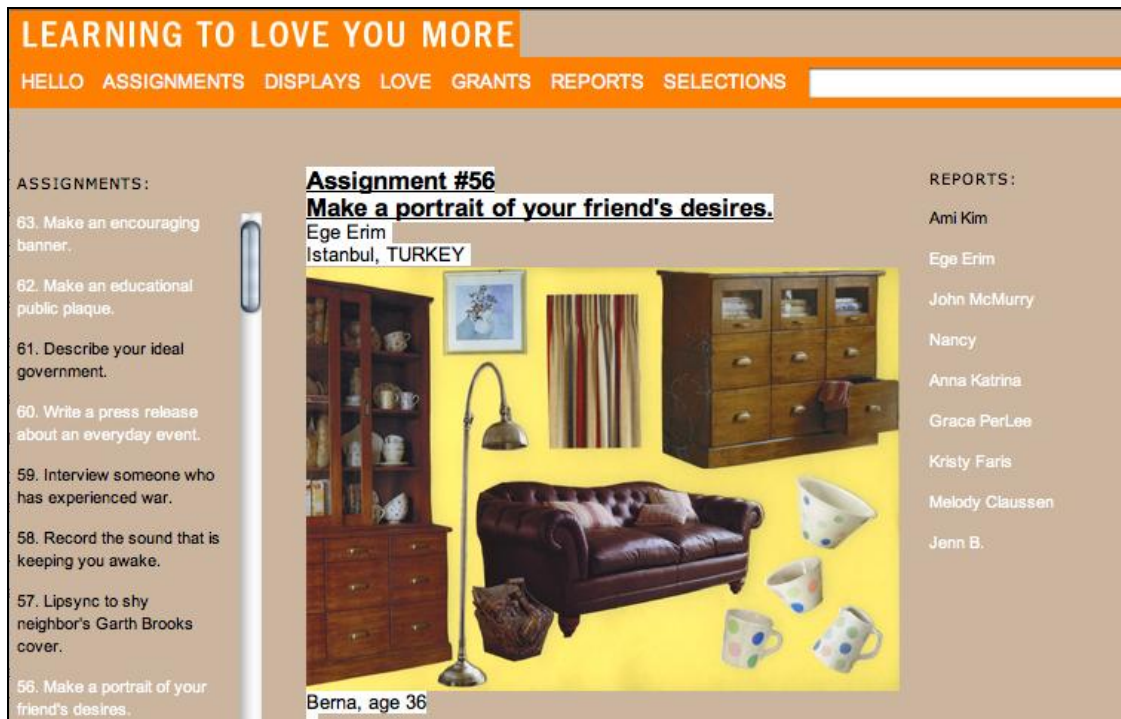


Figure 1. Screenshot from Miranda July and Harrell Fletcher's *Learning to Love You More* (2002–2009), a crowdsourced art project based on weekly assignments.

The recent trend of crowdsourced art has also found productive and ingenious applications in cinema. Casey Pugh's acclaimed mash-up *Star Wars Uncut* (www.starwarsuncut.com) used fan-submitted media to crowdsource a remake of the classic film *Star Wars IV: A New Hope*. Almost a thousand people participated in this project, recreating the famous world of Luke Skywalker and Princess Leia with everything from cats to fingers to costumed children to salt and pepper shakers. Garnering very positive reviews, *Star Wars Uncut* won a 2010 Emmy Award for Outstanding Creative Achievement in Interactive Media. Following the success of this initial experiment, the creators of the project are now accepting submissions for *The Empire Strikes Back*, the next episode in the *Star Wars* saga.

Cinematic crowdsourced art is not limited to independent or emerging filmmakers; recently, even well-established producers and directors have capitalized on the opportunity to engage their audiences and benefit from free user-generated content. In 2012, acclaimed Danish director Lars von Trier launched an open online invitation to contribute to his new film, *Gesamt* (www.gesamt.org), by submitting media

clips inspired by six famous works of art that von Trier selected. Commenting on the aesthetic mission of *Gesamt*, on the project website the director asks,

What happens when a master challenges the people? When everyone is invited to reinterpret some of the greatest art pieces of our time? Is it within everyone to make art? And do we stand out the most when we stand together?

Similarly, *Life in a Day* (<http://www.youtube.com/user/lifeinaday>), a documentary project envisioned and produced by renowned Oscar-winning filmmakers Ridley Scott and Kevin Macdonald, invited participants from all over the world to film, on July 24, 2010, a brief video of their life on that particular day. The 5,000-plus hours of video submitted by users was then edited and condensed into a feature-length documentary, which premiered at the Sundance Film Festival. Released in theaters nationwide precisely 1 year later (on July 24, 2011) and now available for free on YouTube, the project claims to be “a historic global experiment to create the world’s largest user-generated feature film: a documentary, shot in a single day, by you” (“Life in a Day,” n.d.).



Video Clip 2. Official trailer for *Life in a Day* (dir. Kevin Macdonald, 2010).

Beyond the field of visual arts, there also have been several exciting applications of artistic crowdsourcing in the production of sound and music. Aaron Koblin is a pioneer in this area as well: his crowdsourced musical project *Bicycle Built for Two Thousand* (www.bicyclebuiltfortwothousand.com) is a collection of 2,088 voice recordings from online workers assembled into the song “Daisy Bell.” Each participant was prompted to listen to a short sound clip and then record himself or herself imitating that sound without knowledge of the final task; put together, the sounds came together as “Daisy Bell.” *The*

Virtual Choir (www.ericwhitacre.com/the-virtual-choir), a similar project conceived by acclaimed modern composer Eric Whitacre, collected 2,052 self-made recordings of people performing the same song. Whitacre then recombined these sound clips into one collective rendition and uploaded the result back to YouTube.



Video Clip 3. Eric Whitacre provides an introduction to his Virtual Choir (2010).

Darren Solomon's collaborative music and spoken word project *In B Flat* (www.inbflat.net) further incorporates an element of interactivity by allowing visitors to the site to build their own symphony by playing any or all of the user-submitted music jams at the same time and in any order. In addition, a few famous music artists have joined the crowdsourcing trend, most notably Radiohead (www.radioheadremix.com), who offer raw tracks for download and invite fans to remix them for a new album.

Finally, a few notable applications of the crowdsourcing process have taken place in the realm of literary arts. In comparison to other artistic forms, crowdsourced literary projects are quite rare due to doubts about the suitability of this technique for the process of creative writing and the failure of a series of collaborative journalism projects, particularly the high-profile *Assignment Zero*. Among these few projects, the online writing community Protagonize (www.protagonize.com) has been one of the most successful endeavors. Protagonize allows members to work on their own stories as well as contribute to others' narratives, but full membership is reserved for paying subscribers. Another interesting example is filmmaker Tim Burton's *Cadavre Exquis* (www.burtonstory.com), an experiment in crowdsourcing a movie script via Twitter, where fans contributed to the development of the script using the hashtag #BurtonStory (see Figure 2). Every day, Burton chose one tweet that became the continuation of the story. The opening line was, "Stainboy, using his obvious expertise, was called in to investigate mysterious glowing goo on the gallery floor."

Tim Burton's
Cadavre Exquis

Cadavre Exquis or "Exquisite Corpse" is a technique used to collectively tell a story. Each contributor adds to the story in sequence, building on the last line revealed.

Join Tim Burton in a story-making adventure. Contribute a line of your own based on the last visible Tweet.

Part 1 "Stainboy, using his obvious expertise, was called in to investigate mysterious glowing goo on the gallery floor #BurtonStory" [...]

BurtonStory tweeted on Nov. 1st, 2010

LATEST TWEET READ THE STORY

Project ended Dec 6th. Thank you for playing!

Download Printable Story

Details

- This story telling experiment runs November 22 - December 6, 2010
- Tweet as often as you like
- The best Tweets of the day will be selected to build the story
- All selected Tweets can be viewed under "All Submissions"
- Follow the story as it unfolds on the "Read the Story" tab
- Inappropriate submissions will be blocked

What is Twitter?

Twitter is a real-time information social network that enables users to send and read users' messages called Tweets –

1 Stainboy, using his obvious expertise, was called in to investigate mysterious glowing goo on the gallery floor #BurtonStory **2** He felt his heart pounding hard against his ribs. As he bent down, he saw his own reflection on the surface of the puddle. #BurtonStory **3** Withholding his breath, he lightly poked the surface of the puddle. The surface shifted strangely, slowly spinning into action. #BurtonStory **4** Stainboy took a step back as the goo continued to spin faster and faster. A sharp cold wind whipped round the room. #BurtonStory **5** The chandelier swung, the art on the walls shook against the walls, and the goo began to take form. #BurtonStory **6** Slowly beginning to encircle Stainboy, the gelatinous mountain of goo looked almost familiar. #BurtonStory **7** Stainboy's eyes narrowed as he tentatively lifted his hand towards the goo, allowing it to

Figure 2. The first few lines of Tim Burton's Cadavre Exquis (2010), a crowdsourced Twitter story.

In view of the diversity of online crowdsourced art projects, as illustrated by the examples cited so far, it is useful to map out this artistic trend by developing a comprehensive and multidimensional typology of online crowdsourced art. Table 1 organizes this classification according to a set of multiple criteria.

Table 1. A Typology of Online Crowdsourced Art.

Criterion	Categories	Examples
By medium	Visual (drawing, photography, video, etc.)	<i>The Sheep Market, LTLYM, SwarmSketch, Life in a Day</i>
	Musical (music and acoustic art)	<i>Bicycle Built for Two Thousand, The Virtual Choir, In B Flat</i>
	Literary (poetry and creative writing)	<i>Tim Burton's Cadavre Exquis, Protagonize</i>
By the role of the alpha artist	Vertical (giving specific assignments)	<i>LTLYM, The Johnny Cash Project, The Sheep Market</i>
	Horizontal (open-ended)	<i>This Exquisite Forest, Life in a Day</i>
By conceptual design	Transparent (participants know what the end product will be)	<i>SwarmSketch, Star Wars Uncut, Life in a Day, The Virtual Choir</i>
	Opaque (participants contribute without knowledge of the final product)	<i>Ten Thousand Cents, The Sheep Market, Bicycle Built for Two Thousand</i>
By degree of interrelation	Dialogic (individual contributions are in dialogue with each other, and participants get to see others' contributions and build on them)	<i>SwarmSketch, This Exquisite Forest, Tim Burton's Cadavre Exquis</i>
	Independent (individual contributions are independent from each other, and participants do not get to see others' contributions until the project is finalized)	<i>Life in a Day, Ten Thousand Cents, The Sheep Market, Bicycle Built for Two Thousand</i>
By end product	Single (a single collective artwork made of small contributions from numerous users)	<i>Ten Thousand Cents, Life in a Day, The Johnny Cash Project, SwarmSketch, Star Wars Uncut</i>
	Multiple (individual user-submitted artworks prompted by a common assignment)	<i>LTLYM, The Sheep Market</i>
By financial reward	Free (unrewarded)	<i>LTLYM, Life in a Day</i>
	Paid (participants are paid for their contributions)	<i>Ten Thousand Cents, The Sheep Market</i>
	Fee-based participation (participants have to pay to contribute)	<i>Radiohead Remix Project</i>

Crowdsourced Art and Relational Aesthetics

As critics have pointed out over the past two decades, contemporary art is undergoing a crucial change in that “the art object is no longer necessarily the primary focus of the encounter with art” (Beech, 2010, p. 20). The demotion of the passive, receptive viewer—rooted in conceptualism and a critique of opticality—has given rise to participatory artistic practices that seek to blur the boundaries between artist and audience, producer and consumer, actor and subject. On a sociopolitical level, the act of questioning or challenging these boundaries is a fundamental prerogative of contemporary art and positions participatory art as part of “the current enthusiasm for revisited spaces of conviviality and crucibles where heterogeneous modes of sociability can be worked out” (Bourriaud, 2006, p. 164). According to Claire Bishop (2004), the emergence of participatory art mirrors social and cultural shifts in late capitalism and is thus a response to the perceived erosion of social relations, the commodification of experience, and similar social and political factors. Artists working under this model generally invoke three main motivations for the practice of participatory art: activation (by stimulating empowerment as well as individual and collective agency), authorship (or the cessation of authorship to make the artistic process more democratic and egalitarian), and community (via the restoration of lost or weakened social bonds) (Bishop, 2006). Jacques Rancière (2006) echoes Bishop’s view. Noting the same perceived deterioration of social relations in late capitalism, he argues that “yesterday’s distance towards commodities is now inverted to propose a new proximity between entities, the institution of new forms of social relations.” In this sense, “art no longer wants to respond to the excess of commodities and signs, but to a lack of connections” (p. 90).

Finally, no discussion of participatory art is complete without considering Bourriaud’s *Relational Aesthetics* (2002), a critical treatise on the spectrum of contemporary art. In this important series of essays, Bourriaud describes relational art as “an art that takes as its theoretical horizon the sphere of human interactions and its social context, rather than the assertion of an autonomous and private symbolic space” (p. 160). Building on Marx’s use of the term “interstice” to denote trading communities that escape the capitalist framework (barter, autarky, and so on), Bourriaud advances the notion of the artwork as “social interstice”: “a space in social relations which, although it fits more or less harmoniously and openly into the overall system, suggests possibilities for exchanges other than those that prevail within the system” (p. 161). For Bourriaud, the basic hypothesis of relational art is “the sphere of human relations as site for the artwork,” where “form takes priority over things, and flows over categories: the production of gestures is more important than the production of material things” (Bourriaud, 2006, pp. 165, 170).

Crowdsourced art, as a digital subspecies of participatory art, is rooted in the latter’s artistic heritage of collaboration and participation. In the early 1920s, the Surrealists developed the “exquisite corpse” technique, where artists contributed to a larger piece of work in a gamelike fashion without seeing previous additions; however, this mode of artistic production was not open to the public at large, but only to a few invited artists in the Surrealist circle (Adamowicz, 1998). The participatory art of the 1960s and 1970s—best exemplified by movements such as Fluxus and Happenings—extended the invitation to contribute to the artistic process to a wider public, but this was dependent on their physical presence at

the site of production or exhibition. Subsequent decades have seen a proliferation of artists working in the participatory vein, and key figures such as Thomas Hirschorn, Rirkrit Tiravanija, and Marina Abramovic continue to shape the directions of contemporary art. Their projects, illustrating the social and authorial concerns of relational art, invite participants to step into constructed situations that highlight the social dimension of experience, and the projects challenge traditional notions of authorship and artistic distance.

With the rise of the Internet, artists interested in collaborative or participatory art found an ideal platform to reach an infinitely wider and more diverse pool of potential contributors. As curator Andrea Grover notes, "having the audience become co-creators is not a new impulse"; the Internet simply offered a new platform to accomplish this goal (Strickland, 2011, para. 5). Nevertheless, due to the particularities of the digital medium as a facilitating platform and given the lack of physical copresence that lies at the core of encounter-based participatory art like that of Tiravanija or Abramovic, there is a need to differentiate between online and offline participatory art and to engage in a tailored discussion of online crowdsourced art that takes into account the fundamental characteristics of its platform and mode of interaction.

Although several crucial paradigms of participatory art—particularly those of Bishop, Bourriaud, and Kester—are valuable for a deeper sociocultural and political understanding of this genre, they fall short of fully explicating the phenomenon of online crowdsourced art because of their omission of the Internet's function and mediating effect as a technological forum for collaborative art making. If Bourriaud views relational art as rooted in the "sphere of human relations," crowdsourced art refers to the sphere of human relations *as mediated by technology*. Significantly, because there is no physical encounter in online crowdsourced art, the social aspect of artistic coproduction is to be found in the formal (digital) fiber of the art project; form and socialization are necessarily interlinked, jointly exposing the technological structure that facilitates and mediates this digital encounter. Speaking of Rirkrit Tiravanija's participatory art practices, Bishop (2004) acknowledges the conditioning factor of copresence and aptly identifies cultural capital as a further source of identification and social interrelation. She writes,

Despite Tiravanija's rhetoric of open-endedness and viewer emancipation, the structure of his work circumscribes the outcome in advance, and relies on its presence within a gallery to differentiate it from entertainment. Tiravanija's microtopia gives up on the idea of transformation in public culture and reduces its scope to the pleasures of a private group who identify with one another as gallery-goers. (pp. 68–69)

This sense of community building and identification, however conditional and however brief, is a core prerogative of participatory or relational art and is much harder to attain in online crowdsourced artistic projects. Whereas in relational art, according to Bishop (2004), the audience or "viewers are actually given the wherewithal to create a community" (p. 54), the lack of social encounter and face-to-face communication makes the creation of this community more problematic in online situations. In crowdsourced art, the crowd is still a crowd, not yet a community.

Redefining the Role of the Artist: The Alpha Artist in Crowdsourced Art

Since crowdsourced art relies quintessentially on the artistic contributions of an open pool of participants, this radical democratization of the artistic process comes into conflict with the traditional way of making art. The long-standing notion of art as the individual expression of one person's vision and artistic sensibility is questioned within the inclusive, participatory *modus operandi* of crowdsourced art. This ideological conflict has significant implications for the role of the artist as well as the role of the audience. Is the artist still the main author of the artwork if she or he completely crowdsources the generation of artistic content? And are the contributors—as producers of artistic content—participants, collaborators, or artists themselves? This section focuses on the role of the project originator—let us call this person the “alpha artist”—in the process of crowdsourced art, and the next section will discuss the part played by the contributors and the varying degrees of participation that characterize such projects.

In his canonic sociological study, *Art Worlds* (1984), Howard Becker devotes considerable attention to the cultural and ideological perception of the artist's role in society, noting the complex factors behind bestowing the title of “artist” on a cultural producer. Since the aesthetic standards that people use to label something as art, or someone as an artist, are not perceived in their minds as “arbitrary and conventional” but rather as “natural, proper and moral,” it follows that “an attack on a convention and its aesthetic is also an attack on morality” (Becker, 1984, p. 305). In this vein, the manner in which crowdsourced art challenges existing standards of artistic merit and questions the cultural privilege of the professional artist in society can be seen as an attack on an entire morality, and not just on a cultural tradition of artistic production.

The question then becomes, as Becker (1984) aptly puts it, “how little of the core activity can a person do and still claim to be an artist?” (p. 19). Given the unique characteristics of crowdsourced art, it is often difficult to delineate exactly what this “core activity” consists of. If we consider, on the one hand, the alpha artist's act of conceiving the art project and providing a platform for user participation, and, on the other hand, the participants' act of producing the actual artistic content, arguments can be made in favor of both of these practices as core activities. Without the work of the alpha artist, there would be no concept and no platform for participation; without the work of the contributors, there would be no artistic content to realize the artist's vision. In either case, the project would not materialize—both the alpha artist and the contributors are mutually dependent and can thus, arguably, both be considered as agents of core activities.

However, the relative significance of the alpha artist's input is also determined by the vertical or horizontal nature of the crowdsourced art project, as per our previous typology. Surely, there is a fundamental difference in the artistic engagement of Peter Edmunds, the originator of the rather horizontal project *SwarmSketch*, and of Miranda July, the artist behind *Learning to Love You More*, which is a more vertical artistic endeavor. While Edmunds designed the drawing interface of *SwarmSketch.com* and programmed it to select a new word by random from the top-ranked Google searches of each week, July conceived of new creative assignments each week, communicated them to the public, reviewed all submissions received, and then posted them to the website on a weekly basis. Thus, although they are

both alpha artists in their respective projects, the levels of engagement and their artistic merits are considerably different.

In a sense, in projects such as July's *Learning to Love You More* or Macdonald's *Life in a Day*, the alpha artist is akin to a curator. As the manager of the project, the alpha artist—just like a curator—judges, selects, and arranges the participant-submitted contributions into a final product that is not unlike an online gallery or museum exhibition. The involvement of the alpha artists thus facilitates the presentation of the project in a feasible and appealing fashion and showcases the contributions that are deemed of a superior quality.

In terms of the recognition of artistic merit, the position of the alpha artists in crowdsourced art raises important questions about formal authorship and aesthetic accountability. Given the way that art worlds operate—and since art is rarely anonymous—someone inevitably gets the credit for being the “artist”; moreover, as Foucault (1979) argued in relation to literature, the author also fulfills a functional need. In music, for instance, it is the conductor or the composer who gets the credit, not the orchestra members; in cinema, it is the director, not the writer, the producer, or the actors; in fashion, it is the designer, not the manufacturer, the stylist, or the model. However, just as the conductor is responsible for ensuring the musical cohesion of the orchestra, so too does the alpha artist play a fundamental role in coordinating the art project and establishing certain conventions that need to be in place for a meaningful participation. These conventions, which are necessary for the functioning of any art world (Becker, 1974), must be rigid enough to guarantee a sense of cohesion in the work of art but flexible enough to allow for the expression of individual creativity. The establishment of these conventions, which gives the artwork its needed structure, is a key activity that the alpha user performs, further enhancing the significance of the alpha artist's role and underscoring the need for his or her involvement.

The Artistic Input of the Crowd: Qualifying Participation

Joseph Beuys, originator of the social sculpture theory, famously claimed that everybody is an artist, but this artistic potential gets stifled by social norms and pressures. Far from advocating—as some mistakenly interpret his well-known adage—that everyone should be involved in the creation of art, Beuys believed in the creative abilities of people in their everyday life and advocated for a more extensive and inclusive reconceptualization of art (Mesch, 2007). Howard Becker (1984), writing on art as collective activity, provides a more practical viewpoint. In capitalist societies, Becker suggests, “people keep the idea that artists have a special gift but do not believe that there is any way to tell who has it outside of letting everyone try and then inspecting the results” (p. 16).

While crowdsourced art challenges the traditional role of the artist, it simultaneously redefines the conventional function of the public, turning them from passive receivers into engaged producers. Despite the value of this inclusive trend, however, a critical set of questions concerns the creative agency of the crowd in such artistic projects and the overarching moral economy of crowdsourced art. Specifically, in terms of crowd contributions, what constitutes meaningful artistic participation? And is crowdsourced art guilty of the same ethical critiques attributed to commercial crowdsourcing?

As Dave Beech (2008) aptly notes,

[T]here is a temptation, within this earnest tradition of participation, to treat it as a solution to the problems endemic to the whole range of established forms of cultural engagement, from the elitism of the aesthete to the passivity of the spectator, and from the compliance of the observer to the distance of the onlooker. (p. 3)

Artists and curators working in the tradition of relational art tend to see participation and sociability through an optimistic, micro-utopian lens, and their discourse often omits conflict or hierarchization (Bishop, 2004; Foster, 2006). The trend toward inclusion and participation and the call to reconceptualize art as an egalitarian cultural practice is indeed reminiscent of the Marxist impulse to revolutionize society by abolishing class distinctions: "participation is thought of as a form of cultural engagement that does away with all previous problematic forms of cultural engagement by eradicating the distinction between all of the previous cultural types and all cultural relations between them" (Beech, 2008, p. 3). From a formal or aesthetic perspective, Bourriaud (2006) even calls for equating aesthetic judgment with an ethical or political judgment of the relationships produced by the artwork; however, as Foster (2006) observes, the quality of these relationships is never questioned or investigated.

In reality, there are subtle degrees of participation in art. Participation cannot be used as a blanket term or as a panacea, since it does not account for the complexities of creative agency, artistic hierarchies, access, and capital. A close analysis of online crowdsourced art reveals a complex ladder of participation, and I therefore suggest a more nuanced model of understanding the various levels of engagement, highlighting the different affordances of receptive, executory, and structural participation.

Table 2. The Levels of Artistic Participation.

	Type	Defining Features	Examples
Receptive	Passive	Consumption based: audience receives a finished artistic product	Traditional artistic modes: painting, opera, etc.
Executory	Tokenistic	Opaque and nondialogic microparticipation in a predesigned project	<i>Bicycle Built for Two Thousand, The Sheep Market</i>
	Engaged	Transparent but highly structured participation in a predesigned project	<i>The Johnny Cash Project, SwarmSketch</i>
	Creative	Transparent, reflective, and expressive participation in a predesigned project	<i>Life in a Day, LTLYM, This Exquisite Forest</i>
Structural	Codesigned	Participants are invited to weigh-in on the design or structure of the project	<i>Wikipainting</i>
	Coauthored	Participants' structural contributions are formally recognized and rewarded	Only offline examples

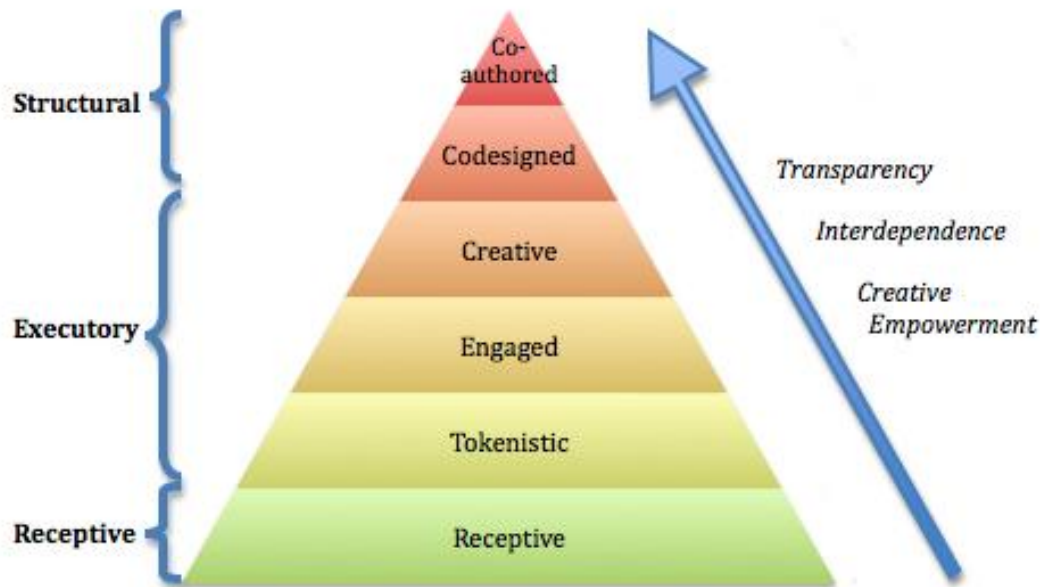


Figure 3. The pyramid of participation: A schematic depiction of the levels of artistic participation.

As illustrated by Figure 3, as the intensity of participation increases, so does the creative agency of the contributors. Artistic projects that allow for a greater level of participation also evidence a higher degree of conceptual transparency as well as an increased interdependence between the individual contributions.

Receptive participation requires the lowest degree of creative engagement under this model and refers to the process whereby the viewer or audience receives a finished artistic product. Many crucial voices in cultural studies and media scholarship have pointed to the active elements of consumption and spectatorship (most prominently, Barthes, 1979; de Certeau, 1984; Eco, 1989; Hall, 1993; and Rancière, 2006), noting that the spectator is more than a passive consumer and takes an active role in interpreting or decoding the artwork. The notion of receptive participation, as employed here, accommodates this view, acknowledging the space for active interpretation and creative consumption. Therefore, the receptive nature of this type of engagement refers to the situation where the viewer may interpret and reflect upon the artwork, but, fundamentally, is not invited to take an active part in the generative process.

Executory participation is the task-based, generative participation in a predesigned artistic project. It is analogous to entering a contract by agreeing to its specific terms and conditions: when deciding to participate in the artistic process, the contributor accepts the parameters of participation, but has no structural agency—or, in other words, has no power to challenge or modify these parameters. Often these types of projects are experiments in conflating art with labor, research, or sociological experiments, as exemplified by Aaron Koblin's Mechanical Turk art. According to their level of transparency and the space allowed for personal expression, executory crowdsourced art projects can be tokenistic, engaged, or creative.

Tokenistic projects are characterized by microlevel participation in projects that are usually opaque and nondialogic—meaning, as per our previous typology, that the contributors have no knowledge of the final product, nor can they see others' contributions and build on them. These tasks, such as recording a sound bite in *Bicycle Built for Two Thousand* or reproducing a minuscule part of a predrawn dollar bill in *Ten Thousand Cents*, are generally uncreative and leave little space for meaningful creative expression. Such tokenistic projects are in the most acute danger of being criticized for objectifying the crowd for the benefit of the artist and of the artwork. Grant Kester (2004) argues that all participatory art is a way for the artist to profit from his or her social privilege, but tokenistic art, in view of its lack of transparency (since contributors are kept in the dark as to the purpose of their contribution and the scope of the project), is particularly concerning in this respect. As Koblin (2010) anecdotally mentions in his talk at the TED conference, out of the thousands of participants that blindly followed his instructions to draw a sheep on Mechanical Turk, only one of them used the drawing interface to scribble the words "Why? Why are you doing this???" The analogy between the participants and sheep—as unquestioning animals drawn by herd mentality—is present both in the concept and the execution of Koblin's project.

The second variety of executory participation—which I have called *engaged*—is transparent but highly structured participation in a predesigned project. Engaged participation is different from tokenistic participation in that the former refers to transparent, and not opaque, projects. For instance, Koblin's *Johnny Cash Project* is an example of engaged participation because contributors know the purpose of their involvement and the scope of the project; *SwarmSketch* similarly lets users know the precise function of the project. Therefore, while the space for personal expression and creative agency is still limited (for instance, a reproduction of a frame in *The Johnny Cash Project* or the generation of a single line in *SwarmSketch*), these two projects are examples of engaged, and not tokenistic, participation due to their quintessential transparency.

Creative participation, while still an executory type of engagement in a predesigned project, refers to transparent and dialogic projects allowing for reflective, creative personal expression. While the contributors still do not have structural agency, the parameters of artistic participation are less strict, and the emphasis is on individual creativity and the diversity of artistic expression. Projects where the alpha artist acts as a curator, as in *Learning to Love You More* or *Life in a Day*, are the most representative examples of creative executory participation. A potential pitfall to be avoided in this type of creative project relates to the artistic quality of the received contributions. Specifically, how can the alpha artist ensure that the contributions received from an unknown and nonprofessional pool of participants will be of a satisfactory aesthetic or artistic quality? In cases such as these, the role of the alpha artist in the

process of conceiving and curating the project is all the more critical, as the parameters of engagement need to allow for enhanced creativity while simultaneously keeping the barriers of entry—both aesthetic and technical—sufficiently low. Miranda July and Harrell Fletcher, with *Learning to Love You More*, provide an admirable example of striking a balance in this respect, as their weekly assignment-based project allowed for multiple points of entry and the use of a wide variety of artistic and multimedia skills.

Finally, with **structural participation**, participants have a say in the conceptual and artistic design of the project; in other words, they are allowed to demonstrate structural agency. In *codesign*, participants are invited to weigh in on the structure of the project; in the case of *coauthorship*, in addition to their conceptual input, their contributions are formally recognized and rewarded. Both codesign and coauthorship reflect a more genuine desire for openness, and they tend to function as statements on alternative *modes* of art making.

Wikipainting is the paradigmatic example of codesign in online crowdsourced art. This initiative provides a space for collaborative painting (with users being unlimited in the number and type of additions they can make to any new or extant drawing), but the feature that allows for structural agency and really qualifies this project as an exemplar of codesign is the ability to modify the freely available source code as well as to suggest improvements to the structure of the applet. The Wikipainting home page invites participants with coding expertise to submit upgrades or help fix lingering bugs, and everyone else is asked to add suggestions to a “to-do list,” which the coders use to improve the painting applet. The to-do list includes suggestions such as adding the abilities to undo more than one brush stroke, add text boxes, or paint in full-screen mode.

The case for coauthorship is more complicated, and so far there have been no cases of formally sharing authorial rights in online crowdsourced art. Indeed, participants cannot even claim legal authorship of their individual contribution, given the copyright and intellectual property policies of such online crowdsourced projects. Further complications arise when the alpha artist accrues revenue from the exhibition and sale of crowdsourced artworks, but profits are not shared with the original contributors—a criticism similarly attributed to commercial crowdsourcing, which is often condemned as a form of labor exploitation (Brabham, 2008; Chandler & Kapelner, 2010; Schenk & Guittard, 2011). In the case of *The Sheep Market*, the participants were paid 2 cents for their contributions, and Koblin sold the 10,000 generated sheep for \$20 each. Upon hearing this, the original contributors who had drawn the sheep were outraged and passionately discussed this topic in a series of message-board conversations on the Mechanical Turk forum. They created a special discussion thread titled “They’re selling our sheep!!!” which tackled the ethical, legal, and aesthetic aspects of the issue and included posts such as, “Does anyone remember signing over the rights to the drawings?” and “Someone should contact them and see how much they’d charge you to buy back the rights to one of your own sheep” (Koblin, 2006, pp. 29–30).

A comparison between the executory and structural modes of participation in crowdsourced art highlights an important distinction between participation and collaboration. This fundamental contrast is the lack of influence that participants—unlike collaborators—have over the structural design of the artwork and the claim of authorial rights (Browne, 2008). Thus, participants, as opposed to collaborators, do not have the agency to affect conceptual or structural changes in the artistic project; when deciding to

contribute to the artwork, they automatically accept the parameters of the project and agree to “enter a pre-established social environment that casts [them] in a very specific role” (Beech, 2008, p. 3).

Another way to look at the contrast between executory and structural participation is in terms of the dichotomy between agency and choice. The existence of a preestablished structure or design for the artistic project offers choices of action, but falls short of allowing for the ability to *affect* these choices through creative agency. In fact, one critic goes so far as comparing, quite convincingly, the tokenistic type of contributions in participatory art to “the participation offered in an elected democracy, or in public consultation methods where residents are given the opportunity to choose from a fixed number of designs” (Abbott, 2008, p. 24). Although any type of structure—artistic of otherwise—rests on a certain combination of available choices, it is the ability to affect or provide these choices that constitutes the mark of structural agency.

Conclusion: Agency and Structure in Crowdsourced Art

As evidenced by the complexities of participation outlined so far, a critical analysis of crowdsourced art points to a larger discussion of the tension between structure and creativity—one that has been heavily debated in both sociology and art criticism. Janet Wolff suggests that this tension is unnatural, arguing that structure and agency are in fact mutually interdependent and should not be conceived of as one taking primacy over the other (Wolff, 1981). Anthony Giddens (1976) advanced the equally reconciliatory notion of the “duality of structure.” He suggests that structures are both the product and the conditions of human agency and “must not be conceptualized as simply placing constraints upon human agency, but as enabling” as well (p. 161).

Online crowdsourced art can be seen as the product of two specific structures: the conceptual or aesthetic structure of the project itself and the technological structure of the Internet as a facilitating platform. Fundamentally, the two are highly interrelated, even though they each present their own particular affordances and pitfalls. While our discussion so far has focused on the aesthetic structure of the project—and the type of relationships this structure produces—it is also necessary to briefly examine the nature of the Internet as a conditioning structure in online crowdsourced art.

As Giddens suggests in regard to the duality of structure, the Web, in acting like a structure for these artistic projects, is both enabling and constraining. On the one hand, the radical democratization of artistic involvement by means of the web-enabled open call extends the opportunities of participation to a potentially global community and thus removes significant economic, cultural, and social barriers that might have otherwise prevented people from participating in a conventional, encounter-based artistic process. As noted in the description of the roots of crowdsourced art, while participatory art projects existed before the rise of the Internet, it is the unique affordances of the Web as a platform for diversity and interconnection that enabled such initiatives to come into full fruition. In this sense, online crowdsourced art is a timely practice that capitalizes on the principal features of our contemporary participatory culture. According to Henry Jenkins and colleagues (2006), a participatory culture is one with relatively low barriers to artistic expression and strong support for creating and sharing one’s work with others; its members believe that their contributions matter and feel some degree of social connection to

one another. Crowdsourced art, therefore, fits well within this participatory paradigm, harnessing the diversity and creative potential of global networked communities and providing a channel for the collective expression of human experience. Moreover, the interactive nature of Web 2.0 and its emphasis on user-generated content (Brabham, 2008) makes it a particularly suitable channel for crowdsourced creative contributions, turning self-expression into digital play.

However, it is important to acknowledge that, although the invitation to participate in crowdsourced art projects is, in theory, open to anyone, certain barriers make universal participation implausible, and, in this sense, the Web acts as a constraining structure. The participation gap (Jenkins et al., 2006)—a revision of the rather problematic term “digital divide”—is one of the principal obstacles: despite the rising worldwide popularity of the web, a vast portion of the global population does not have access to the Internet. What is more, even those who do have an Internet connection might not be able to contribute to these crowdsourced art projects due to low bandwidths and the lack of sophisticated Flash and Java plug-ins required by the complex interfaces of such websites. Furthermore, just as the invention of printing created a different audience for literature (Wolff, 1981), the web as a technology produces both a specific kind of contributor pool and a specific kind of audience. The creation—or definition—of this audience is significant, because it affects the nature and message of the artwork. I would argue that the desire to participate in crowdsourced art projects is strongly related to a certain type of cultural capital, which makes one recognize the artistic innovation and aesthetic significance of such initiatives within a larger tradition of art and culture. This is less applicable in the case of opaque projects, where contributors do not have knowledge of the final product or the purpose of their creations, but it is certainly a major factor determining one’s desire to participate in projects such as *Learning to Love You More* or *Life in a Day*. Finally, for a few of these projects, contributors also need economic capital to participate: for Radiohead’s remix project, for instance, users who wanted to try their hand at remixing the tracks had to buy the song “stems”—the components of the track—from iTunes, thus raising important questions about the function of this initiative as a mechanism for authentic fan engagement or, alternatively, a profit-generating strategy.

Therefore, while crowdsourced art represents a welcomed progressive development in the cultural tradition of art making and a significant step toward a more inclusive type of creative production, it is important to acknowledge that public participation in such projects is not structural, nor truly democratic. Certainly, further research is needed in this area, particularly in regard to the motivations for participation in crowdsourced art. An important direction for future research on this topic also concerns the cultural identity of the participants in crowdsourced art projects. Recent empirical research in the field of crowdsourcing indicates that often the crowd is not comprised of amateurs, as we would like to assume, but rather of self-selected groups of professionals and semiprofessionals (Brabham, 2010, 2011). It would therefore be important to find out whether the participants in crowdsourced art projects similarly belong to a self-selected group of artists and professionals affiliated with the art world. Finally, future research should attempt to look more closely at the economic aspects of participation, from both an aesthetic and an ethical perspective. For instance, insightful connections could be drawn, in this respect, between online crowdsourced art such as Koblin’s Mechanical Turk projects and paid involvement in offline participatory art—I am thinking primarily of the controversial art of Santiago Sierra, who pays illegal immigrants,

prostitutes, and homeless people minimum wage to sit in boxes in museums or to allow the artist to tattoo a line across their backs.

The practice of crowdsourced art has implications for the study of online engagement, participatory culture, collective creativity, and the future directions of modern art. The emergence of online crowdsourced art is a significant development from both a sociocultural and an aesthetic perspective. "Art was intended to prepare and announce a future world: today it is modeling possible universes" (Bourriaud, 2001, p. 13). However, until participants can truly become collaborators and claim structural agency and authorial rights, their contribution does not fundamentally challenge art's social marginalization and is in danger of merely refashioning the artist-audience relationship in an ethnographic manner (Beech, 2008). In view of these criticisms, while crowdsourced art certainly enhances the social and cultural significance of both the final artwork and the artistic process, it is still far from triggering the aesthetic revolution that Joseph Beuys envisioned in his writings more than 30 years ago. While the distinction between artist and crowd continues to represent a conditioning factor in the structure and cultural function of art in society, perhaps the next question to be explored is not whether the crowd can become artists but whether artists can ever truly come to be perceived as part of the crowd.

References

- Abbott, A. (2008). *Co-opt this: Towards an appropriate language for the evaluation and production of art under cultural capitalism*. Unpublished manuscript. Retrieved from www.yvonnecarmichael.com/andyabbott.co.uk/files/AACo-optThis.pdf
- Adamowicz, E. (1998). *Surrealist collage in text and image: Dissecting the exquisite corpse*. Cambridge, UK: Cambridge University Press.
- Barthes, R. (1979). From work to text. In J. V. Harari (Ed.), *Textual strategies: Perspectives in poststructuralist criticism* (pp. 73–81). Ithaca, NY: Cornell University Press.
- Becker, H. S. (1974). Art as collective action. *American Sociological Review*, 39(6), 767–776.
- Becker, H. S. (1984). *Art worlds*. Berkeley, CA: University of California Press.
- Beech, D. (2008). Include me out! *Art Monthly*, 315, 1–4.
- Beech, D. (2010). Don't look now! Art after the viewer and beyond participation. In J. Walwin (Ed.), *Searching for art's new publics* (pp. 15–30). Bristol, UK: Intellect Ltd.
- Benkler, Y. (2006). *The wealth of networks: How social production transforms markets and freedom*. New Haven, CT: Yale University Press.
- Bishop, C. (2004). Antagonism and relational aesthetics. *October*, 110, 51–79.
- Bishop, C. (2006). Introduction: Viewers as producers. In C. Bishop (Ed.), *Participation* (pp. 10–17). Cambridge, MA: MIT Press.
- Bourriaud, N. (2002[1998]). *Relational aesthetics*. (S. Pleasance & F. Woods, Trans.). Dijon, France: Les Presses du Reel.
- Bourriaud, N. (2006). Relational aesthetics. In C. Bishop (Ed.), *Participation* (pp. 160–171). Cambridge, MA: MIT Press.
- Brabham, D. C. (2008). Crowdsourcing as a model for problem solving: An introduction and cases. *Convergence: The International Journal of Research into New Media Technologies*, 14(1), 75–90.
- Brabham, D. C. (2010). Moving the crowd at Threadless. *Information, Communication & Society*, 13(8), 1122–1145.
- Brabham, D. C. (2011). The myth of amateur crowds. *Flow* 13(6). Retrieved from <http://flowtv.org/2011/01/the-myth-of-amateur-crowds>
- Browne, S. (2008). Crowd theory lite: "The crowd" in participatory art and pop economics. *Circa*, 126, 33–39.

- Chandler, D., & Kapelner, A. (2010). *Breaking monotony with meaning: Motivation in crowdsourcing markets* (Technical report). Chicago, IL: University of Chicago. Retrieved from http://www.danachandler.com/files/Chandler_Kapelner_BreakingMonotonyWithMeaning.pdf
- De Certeau, M. (1984). *The practice of everyday life*. Berkeley, CA: University of California Press.
- Eco, U. (1989). *The open work*. Cambridge, MA: Harvard University Press.
- Foster, H. (2006). Chat rooms [originally published as "Arty party"]. In C. Bishop (Ed.), *Participation* (pp. 190–195). London, UK: Whitechapel/MIT Press.
- Foucault, M. (1979). What is an author? *Screen*, 20(1), 13–33.
- Giddens, A. (1976). *New rules of sociological method: A positive critique of interpretive sociologies*. London, UK: Hutchinson.
- Hall, S. (1993). Encoding, decoding. In S. During (Ed.), *The cultural studies reader* (pp. 90–103). New York, NY: Routledge.
- Howe, J. (2006a). The rise of crowdsourcing. *Wired*, 14(6). Retrieved from <http://www.wired.com/wired/archive/14.06/crowds.html>
- Howe, J. (2006b). Crowdsourcing: A definition. In *Crowdsourcing: Tracking the rise of the amateur* [Web log]. Retrieved from http://crowdsourcing.typepad.com/cs/2006/06/crowdsourcing_a.html
- Jenkins, H., Clinton, K., Purushatma, R., Robison, A., & Weigel, M. (2006). *Confronting the challenges of a participatory culture: Media education for the 21st century* (White paper). MacArthur Foundation. Retrieved from <http://newmedialiteracies.org/files/working/NMLWhitePaper.pdf>
- Kester, G. (2004). *Conversation pieces: Community and communication in modern art*. Berkeley, CA: University of California Press.
- Koblin, A. (2006). *The Sheep Market: Two cents' worth*. (Master's thesis). Design and Media Arts Program, University of California, Los Angeles. Retrieved from www.aaronkoblin.com/work/thesheepmarket/TheSheepMarket.doc
- Koblin, A. (2010). TEDx Talk [untitled]. TEDx Amazonia, Brazil. Retrieved from <http://en.tedxamazonia.com.br/tedtalk/aaron-koblin>
- Lévy, P. (1997). *Collective intelligence: Mankind's emerging world in cyberspace*. (R. Bononno, Trans.) New York: Plenum. (Original work published 1995).
- "Life in a Day" Official YouTube Channel (n.d.). Retrieved from <http://www.youtube.com/lifeinaday>

- Mesch, C. (2007). Institutionalizing social sculpture: Beuys' Office for direct democracy through referendum installation, 1972. In C. Mesch & V. Michely (Eds.), *Joseph Beuys: The reader* (pp. 198–227). Cambridge MA: MIT Press.
- Rancière, J (2006). Problems and transformations in critical art. In C. Bishop (Ed.), *Participation* (pp. 83–93). London, UK: Whitechapel/MIT Press.
- Rheingold, H. (2002). *Smart mobs: The next social revolution*. Cambridge, MA: Basic Books.
- Schenk, E., & Guittard, C. (2011). Towards a characterization of crowdsourcing practices. *Journal of Innovation Economics*, 1(7), 93–107.
- Strickland, C. (2011, January 14). Crowdsourcing: The art of a crowd. *Christian Science Monitor*. Retrieved from <http://www.csmonitor.com/The-Culture/Arts/2011/0114/Crowdsourcing-The-art-of-a-crowd>
- Surowiecki, J. (2004). *The wisdom of crowds: Why the many are smarter than the few and how collective wisdom shapes business, economies, societies, and nations*. New York, NY: Doubleday.
- Wolff, J. (1981). *The social production of art*. New York, NY: St. Martin's Press.