Chapter 2
Beuys Don't Cry: From Social Sculptures to Social Media

Alexander von Lünen

In the end indignation over kitsch is anger at its shameless reveling in the joy of imitation, now placed under taboo, while the power of works of art still continues to be secretly nourished by imitation.

(Adorno, 1978, 225–226)

Abstract This paper looks at the art and philosophy of German fluxus artist Joseph Beuys (1921–1986) and relates this to current debates in the Digital Arts and Humanities. Beuys coined a number of grassroots concepts, such as the "social sculpture." With this he referred to (a) the potential of art to transform society, (b) art as a social product, i.e., sculptures in which the onlookers are part of the artwork, and (c) the potential of every person to be an artist. His often misconstrued punchline of "everyone is an artist" is an extension of Marcel Duchamps' "Ready Made" art, in which anything can be art; i.e., what Beuys proposed was rather that "anyone can be an artist." This chapter looks at the similarities between Beuys' work and Social Media and Digital Humanities, in how far his concept of the 'Social Sculpture' can inform the two.

Keywords History and philosophy of art · Fluxus · Phenomenology of space and time · Digital humanities

Introduction

The crowd was furious. What was this self-styled shaman thinking, destroying century-old art? Well, a replication of the same, anyway. Insults were flying through the air in front of Kassel's Museum Fridericianum, where Joseph Beuys made a spectacle, of what he called the "extended concept of art."

A. von Lünen (✉)
University of Huddersfield, Huddersfield, UK
e-mail: a.f.vonlunen@hud.ac.uk

This so-called 'artist' has made a name for himself chiefly by courting controversy on a regular basis. His step into the limelight came at an exhibition—or shall we say, a performance?—the Festival of New Art at the Technical University in Aachen in 1964. A paint bucket he had used in this performance had spilled over and drops of paint landed on the shoes of one of the right-wing students who were critically accompanying the advertised art performance. Needless to say, this was the spark those students had been waiting for. A scuffle ensued in which Beuys got punched in the face; the photo of him with a bloody nose holding his sculpture (a modified crucifix) in one hand, giving a Hitler salute with the other, went—as it would be called nowadays—'viral' (Joachimides and Rosenthal 1974, 17; Verwoert 2008).

So now Beuys was at it again. While protesters were shouting at him he kept going melting the replica of the crown of Ivan the Terrible.[1] All the while he was chanting the names of legendary alchemists. Because that was what he saw himself like: the great transformer; just as Athanasius Kircher tried to turn lead into gold, so Beuys the anthroposophist wanted to transform humans to a higher form of being. That was, after all, his mission: to use art to transform society into something better. In this, his roots in Fluxus art were quite visible. Fluxus was a response to the loss of authority in postmodern societies. The artist should no longer be the lone genius as sole creator of an artwork, but art should be understood as a social product. Fluxus artists like Yoko Ono had already anticipated this with her unfinished art pieces, which she then left for the audience to complete through interaction, such as Painting to Hammer a Nail In presented in New York City in 1961 in which Ono hung up a white wooden board with a hammer chained to it and a box of nails beside it, inviting visitors to hammer a nail into (Fig. 2.1; cf. Hendricks 2013, 53; Cherix 2015, 16).

Art and Authority

With this, Fluxus departed from earlier art schools such as Dada—although Fluxus is often referred to as "Neo-Dada"—in that it went one step further than the works of Kurt Schwitters or later Marcel Duchamps' Ready-Mades: for Duchamps' message was that anything can be art, but the congenial act of selecting a piece to be art still laid with the single artist; in Fluxus and more prominently in Beuys' work, anyone could be an artist. A single artist could no longer dictate what an audience would have to deem art or not, but was just a provider of possible artworks that an audience then participates to complete. Art thus is no longer an individual act, but a democratic, participatory one (Weinhart 2009, 56).

This is a situation similar to history and other humanities subjects since the 1990s. The World Wide Web (WWW) has challenged the authority of historians. Where movements such as microhistory in the 1970s challenged what can be history, the Internet now challenged who can be a historian. Microhistory in this regard resembled Duchamps' Ready-Mades: anything can be art. Microhistory challenged the notion

---

[1]See https://youtu.be/t2j-579VznQ (accessed 03 Feb 2016) for a video of the performance.

Fig. 2.1 Yoko Ono's Painting To Hammer a Nail In, originally from 1961, here at the 'War Is Over' exhibition in the Museum of Contemporary Art Australia (MCA), 15 Nov 2013 to 23 Feb 2014. *Source* Eva Rinaldi, Wikimedia Commons, CC BY-SA 2.0

that only "great men" can be the subject of historic inquiry, but put the focus on those usually ignored: the "little people," the outsiders; i.e., anything can be history, not only Queens, Kings, Generals, etc.[2] Likewise, just as Beuys postulated "everyone an artist", the rise of the WWW in the 1990s gave way to "everyone a historian". It challenged the gatekeepers, it challenged the authority of historical scholarship "enshrined by institutions and publication venues" (Hitchcock 2008, 81). As a matter of fact, that's why some historians attacked the WWW in the 1990s (while others embraced it):

> Like post-modernism, the Internet does not distinguish between the true and the false, the important and the trivial, the enduring and the ephemeral. [...] Every source appearing on the screen has the same weight and credibility as every other; no authority is 'privileged' over any other. (Himmelfarb 1996).

Now, Gertrude Himmelfarb was concerned about the lack of learning among her students facilitated by browsing for sound bites rather than reflective reading. Yet, it is easy to see the implications for the wider field of authority in historical scholarship.

---

[2]As German playwright Bertolt Brecht already wrote in 1935: "The young Alexander conquered India./Was he alone?/Caesar beat the Gauls./Did he not have even a cook with him?" (Willett and Manheim 1976, 252). Similar challenges haven been made, and are currently underway, in the field of neogeography, which is the topic of the chapters in part IV. Wood (2006, 10) argues along similar lines when talking about map artists: "Map artists do not reject maps. They reject the authority claimed by normative maps uniquely to portray reality as it is, that is, with dispassion and objectivity [...]" (cf. Harmon 2009, 13).

As Hitchcock pointed out, the authority of such scholarship was ring fenced by tradition—the academe and academic publishing. Surely, one could argue that the change in attitudes was not so great. Publication venues may have been altered, but the discursive frameworks are still set by academic historians. 'Hobby' historians and the latter still don't mix much, and the former found their venues even before the dawn of the WWW. Despicable histories, such as Holocaust denial, found their outlet before and there is little evidence that online publishing has made the situation worse—only more visible.

Indeed, many academics were perhaps more worried what the Internet would mean for their own careers. Many faculties still have issues acknowledging online projects as publications worthy of taking into account for a decision on tenure. The American Historical Association (AHA) has recently published guidelines for universities on how to approach digital history,[3] and at the AHA 2016 meeting it was discussed to view digital scholarship as performances, just like Arts and Drama schools evaluate performances of their staff members.

And it is about time to recognize that digital humanities is indeed more about performance than results. Until now, digital humanities have lived off their potential—it is this potential that justifies the term at all for the time being, as the digital humanities have fairly little to show for in terms of revolutionary insights in the humanities that would have not been possible had it not been for computers. So far, the digital humanities are about an approach, not a state (Schmale 2010, 37). Digital Humanities are thus about a performance that leaves the impression of further potential—potential for more digital humanities research required, or the potential for useful data to be exploited by someone else.

Just as Fluxus, and Beuys in particular, have attempted to construct their art works—unfinished works that interact with its audience to be completed. It is no coincidence that the anti-authoritarian Fluxus movement gained traction at a time when established holders of authority and control were increasingly coming under scrutiny. While the anti-authoritarian art movements of the 1920s and 1930s succumbed to the totalitarian backlash (Hitlerism, Stalinism), the 1960s saw a wave of movements questioning power relations.

Art as a Reaction to Technical Change

This struggle over authority is not new, however, but has been a companion—if not its epitome—of modernity. Instrumental in this challenge to authority was technology. The industrialization of the Western world and its impact on society in the nineteenth century found a number of commentators, such as Karl Marx or Charles Dickens.[4]

---

[3] http://historians.org/teaching-and-learning/digital-history-resources/evaluation-of-digital-scholarship-in-history/guidelines-for-the-evaluation-of-digital-scholarship-in-history, June 2015 (last accessed: 22 Feb 2016).

[4] Wagner (1998), among others, gives a good overview of intellectuals and their reaction to the "Question of Technology."

To most contemporaries, technological and scientific change meant some sort of loss. For workers, it meant loss of their traditional roles and family structures; for intellectuals it meant the breakup of feudal structures and thus of a loss of authority. This, in the eyes of thinkers such as Kierkegaard or Nietzsche—and later Heidegger—results in a feeling of alienation and indifference (Dreyfus 2006).[5] Not only would this result in a loss of meaning in the West as Habermas (1976) evinced, but it in turn would also create a sense of loss of security. It is not surprising that the political turmoil of the 1920s and 1930s in Europe coincided with revolutionary scientific breakthroughs (relativity theory, quantum physics, etc.), and that art consequently visualizes this turmoil about security and assertions of authority and traditions. Wrote art theorist Ferdnand Léger in 1914:

> A modern man registers a hundred times more sensory impressions than an eighteenth century artist; so much so that our language, for example, is full of diminutives and abbreviations. The compression of the modern picture, its variety, its breaking up of forms, are the result of all of this. It is certain that the evolution of the means of locomotion and their speed have a great deal to do with the new way of seeing. (Léger 1973, 11–12)

Modern art styles, such as Expressionism or Cubism, represented this "new way of seeing." The "breaking up of forms" in the paintings Léger spoke about reflected the breaking up of forms in real life. Similarly, participatory art in the 1960s reflected the desire for diplomacy and conciliatory politics in the age of the Cold War and the threat of nuclear annihilation. Having witnessed the devastation of the Second World War, caused by a dictatorial regime, the hopes for the pacifying power of direct democracy and participatory politics translated into ambitions of democratic and participatory art.

But there was another technology beside the nuclear bomb and nuclear power that started to have an impact on the contemporary mind, and which was likewise a child of the cold war: the computer. The Cold War necessitated control; control over machines and resources, as much as control over humans (Edwards 1996). Again, it is no coincidence that a political debate would coincide with scientific debates—cybernetics and information theory—that permeated into all layers of contemporary society. The computer became a popular metaphor used in all sciences, such as psychology (Halpern 2014). To be scientific meant—and still means—to be computerized. The Digital Humanities are a response and reflection of this notion.[6] As soon as computers appeared in universities on a larger scale in the 1960s would humanists engage with this challenge.[7]

This urge to computerize science—and consequently society— found its critics, obviously. Philosopher Edmund Husserl called mathematics the "garb of ideas" of science, in which mathematics is used to "dress up" mere methods as "true being"

---

[5]Indeed, Karl Marx, too, has written about alienation in labor to describe the loss of control of the worker over his or her labor: "in his work, therefore, he does not affirm himself but denies himself" (Marx 1974, 66).

[6]See Lünen (2016) for a debate of this notion. Although that paper is about history and GIS, a lot of observations in it hold true for the digital humanities more generally speaking.

[7]See Bullough (1966/67) or Masterman (1962) for such early encounters.

of scientific inquiry (Husserl 1970, 51). And his former student Martin Heidegger coined the term "Enframing" to describe the revelatory potential of technology and its limiting nature alike (Heidegger 1977). Technology, for Heidegger, is a mode of revealing, i.e., it lets one access nature in a way hitherto impossible, for example through laboratory equipment. Yet, technology also transforms the knowledge so produced into a "standing-reserve", i.e., into a mere resource that rids others from the tedious process of knowledge production. Knowledge about the world thus becomes a commodity to be consumed by those not involved in the actual research. Heidegger, although a reactionary who idolized the hardship of manual labor, did not condemn technology outright, but just the consumerist attitude it would evoke and the uniformity it enforces (Dreyfus 2006, 359).[8]

An important point in Heidegger (1977), on the other hand, is once again that of time. Because technology transforms knowledge into a resource, it saves its consumer time. Just as in his other works, Heidegger identified time and its experience as the defining characteristic of modernity. Maybe the biggest change that modernity brought about was the change of temporal experiences, and, in its wake, that of spatial experiences.

We Are Reading Time in Space

As already mentioned, changes in society induced by science and technology effected changes in art and art production. Art from the 1960s onwards became increasingly participatory, challenging the notion of the artist as solitary genius. This is a departure in more than one way. Art used to be a quite top–down process until the early twentieth century. Art was paid for, curated and admired by a few; the general audience was told what art was and what they are supposed to accept as proper art. Yet, the technical age of the radio, the automobile and the airplane changed all of this. As Martin Heidegger noted in his main work Being and Time (1927), human life is determined predominantly by time, not by space. Space is given meaning only through time. If we had infinite time at our disposal, distance—i.e., space—would lose all its significance.[9] While time is still the limiting factor of human experience, technology has altered our sense of time and, consequently, that of space. Distances on Earth have lost a lot of their antagonism, because it is possible (and affordable) to overcome them in a comparably short amount of time—be it physically through budget flights or via teleconferencing.

It was this "annihilation of time" through technology that nineteenth century authors already wrote about in light of the steam engine powered trains and ships. With a world increasingly on the move, in an increased state of flux, old wisdoms

---

[8]It is interesting to note that Heidegger saw art as an escape route to this computerization and technicity of life. Art would help to break this enframing and purchase "the dynamic of the poetic nature of our existence." (Froman 1993, 346).

[9]See more on Heidegger, math, time and GIS in Lünen (2016).

were likewise increasingly questioned. With a world in flux—rapid technical and scientific innovations, showing their potential for atrocities in World War 1 and thereby calling into question romantic notions of battle still prevalent at the time, all the while empires came tumbling down in the wake of that war (Russian Empire, German Empire, Habsburg Empire)—the early twentieth century was a phase of shock and awe for culture. It is thus not too surprising that early twentieth century art was therefore equally trying to shock its audience, sometimes by praising technology for its lethal potential as the Futurists did,[10] or alluding to the perceived chaos by embracing the very same as the Dadaists did.[11] Others, such as Russian avant-gardist Kasimir Malevich,[12] argued that modern science and modern art are on the same page with their potential to destroy the laws and boundaries of tradition: "Science and art have no boundaries because what is comprehended infinitely is innumerable and infinity and innumerability are equal to nothing." (Malevich 1968, 224).

Yet it was not the steam engine or the aeroplane—or the computer for that matter—that had the most profound impact on life and its temporality, but the clock. Said Lewis Mumford:

> The clock, not the steam-engine, is the key of the modern industrial age. For every phase of its development the clock is both the outstanding fact and the typical symbol of the machine: even today no other machine is so ubiquitous. […] The clock, moreover, is a piece of power-machinery whose 'product' is seconds and minutes: by its essential nature it disassociated time from human events and helped create the belief in an independent world of mathematically measurable sequences: the special world of science. (Mumford 1967, 14–15)

This brings us back to the point discussed above, that industrialization challenged the perception of time. This, however, not only through shorter traveling time for individuals, but more strongly through the need of synchronized economic activities, of "correlation of activities over larger geographical areas [which] demanded a system where local times were substituted for standardized ones" (Lundmark 1993, 58). This is what Heidegger and others are referring to when they speak about technology: not technical artifacts, but rather technological systems—systems, i.e., standardizations and formalizations, mandated by technology. The individual automobile is a technical artifact, but the automobile as technology is a system: factories to produce them, dealers to sell them, gas stations to fuel them, garages to maintain them, road works to provide space for them, etc. What Mumford thus criticizes is not the clock as artifact, but the uniformity of social experience it facilitates, i.e., the control that the system of 'the clock' exerts on individuals.

---

[10]"We intend to sing the love of danger, the habit of energy and fearlessness." As the Futurist manifesto heralded it (Harrison and Wood 2003, 147).

[11]"Life appears as a simultaneous muddle of noises, colors and spiritual rhythms, which is taken unmodified into Dadaist art, with all the sensational screams and fevers of its reckless everyday psyche and with all its brutal reality." From the Dadaist manifesto (Harrison and Wood 2003, 258).

[12]There is an argument to be had about Malevich's nationality. Born in the Ukraine to parents who were members of the Polish minority, Kasimir Malevich spent most of his adult life in Russia and is nowadays regarded as the standard bearer of the Russian avant-garde. Cf. Borchardt-Hume (2014).

At the time when Mumford wrote this—1934—there were a number of philosophers involved in the discussion over the nature of time, such as Heidegger or Frenchman Henri Bergson. Bergson's concept of time at first sight appears to diametrically opposed to Heidegger's in that Bergson postulates that human reasoning takes place in space and not in time, i.e., that what humans think of as time is represented as space (Guerlac 2006, 61). However, the human consciousness does not perceive time as space right away, but as what he termed "Real Duration," a "qualitative experience […] that is radically independent of space" (Guerlac 2006, 63).

Mumford's critique of the clock relates to what Heidegger coined as enframing: to enable, but to restrict at the same time. The clock enabled communication and logistics, resulting in the creature comforts we now take for granted in the Western world—including the Internet. At the same time, every modern person knows all too well the pressure applied by strict timeframes and deadlines. Heidegger, however, also discusses the scientification of time, which he calls 'homogenization':

> Homogenization is an assimilation of time to space, to Presence pure and simple; it is the tendency to expel all time from itself into a present. Time becomes fully mathematized, becomes the coordinate t alongside the spatial coordinate x, y, z. (Heidegger 1992, 18)[13]

It is here where we can discern the similarities between Heidegger and Bergson. Both criticized Kant's concept of absolute time for being homogenous.[14] That is, Kant created an equivalence of time and space in that both can be equally atomized and measured. Heidegger and Bergson, on the other hand, both acknowledge time as something that is experienced. As Norbert Elias later would elucidate, time is both absolute and relative; time "is a purely relational symbol" (Elias 1994, 133). Heidegger (1992, 18) goes on to point out that time is irreversible and thus resists homogenization and relies on linguistic constructs, i.e., the relational symbols Elias mentioned.[15] The spatial metaphors used for time are these relational symbols, such as 'before' or 'after' a certain point in time (Pearson 2002, 30). GIS, and other digital technology, on the other hand does not honor these relational spaces. Which is why this debate over space and time is significant for the wider digital humanities, and not just the Spatial Humanities or Historical GIS: the humanities are inherently anachronistic, in the sense that a lot of scholarship deals not only simply with things past, but also deals with them by methods and through views that will be a thing of the past soon; or diachronic, in the sense that processes are studied outside the time interval in which they occurred, as opposed to, say, the social sciences. It is this diachronic nature of the source material and the inaptness of digital tools to handle it that makes the discussion of time/space relevant: the digital humanities have to find a

---

[13]Bergson (1988, 208) made a point similar to Heidegger's homogenization in stating: "To perceive means to immobilize.".

[14]For a discussion of Bergson's critique see Guerlac (2006, 100ff); for a discussion of Heidegger's critique see Mulhall (1996, 160ff). For a discussion of Heidegger's (1992) conception of time—particularly in regard to finitude—see also Alweiss (2002).

[15]Says Bergson (1988, 191): "[…] language […] always translates movement and duration in terms of space." And Heidegger (1992, 18): "Time is irreversible. This irreversibility is the sole factor by which time still announces itself in words […]".

way to translate diachronic processes (i.e., scholarship) into synchronic technology (i.e., the digital). As pointed out, temporal relations have been translated into spatial metaphors in the humanities. Ideas and methods should therefore have more to offer to the humanities than just quantitative analyses of locations.[16]

Yet, just as Heidegger postulated in the above quote, we have expelled all time from our geographical experience. The Topographical Turn, instigated roughly a decade ago by tools like Google Earth, has exiled all temporal associations from our understanding of space. In the Topographical Turn, it does not matter where we came from, or where are going to in the future (Pilz 2015). All that matters is where we are now. As I have argued recently (Lünen 2016), this is not a deliberate decision, but an inherent feature of the Geographical Information Systems (GIS) software. Following Heidegger's remark about homogenization, data models operate in the now and here. Time has to be cast into a static coordinate, alongside spatial coordinates. All that GIS can thus offer to us is a series of meaningless, static snapshots in time. The much discussed Spatial Turn in the humanities is a topological turn, i.e., it cares about relational spaces, and the reason that GIS has not made much inroads with many humanists is exactly for this circumstance: that GIS epitomizes the topographical turn, and not the topological one. There has yet to emerge a 'topographical hermeneutics,' as Sombart (1992) coined it.

However, this is not quite what has, and is, happening in the digital humanities. Most, if not all, digital humanities projects are about creating repositories and quantitative analyses, readying information chunks for other scholars to pick up. But do they? Are tools like GIS telling us anything about the essence of space? Is GIS even supposed to do that? Probably not. So where is the knight in shining armor slaying the dragon—i.e., quantitative methods and topography—and instilling meaning into choropleth maps?[17] Or, to paraphrase the Dada Manifesto: "Has GIS fulfilled our expectations of a technology that burns the essence of space into our flesh?—No! No! No!"[18]

GIS is thus Heidegger's enframing in yet another guise. Technology, according to Heidegger (1977, 13), is "a mode of revealing," not the revelation itself; what is revealed is provided as standing-reserve: "Everywhere everything is ordered to stand by, to be immediately at hand, indeed to stand there just so that it may be on call for a further ordering" (Heidegger 1977, 17). This is what cartography, and as its extension GIS, has done with the world: it set up the surface of the Earth as standing-reserve; Mercator's mapping of the world happened in the context of global trade and colonialism, his maps provided a standing-reserve for those traders

---

[16]See also Pavlovskaya's chapter in this volume for a related debate.

[17]A point Olsson (1999, 141) makes about remote sensing and GIS: "For what is remote sensing, if not a human activity located in the interface between poetry and painting? What is a satellite picture, if not a constellation of signs waiting to be transformed into meaning-filled symbols? In the light of those questions, GIS stands naked before us, shamefully parading as a game of ontological transformations in which theory-laden observations are translated first into patches of color, then into strings of words, finally into purposeful action. Picture becomes story, 'is' turns to 'ought'.".

[18]The original Dada Manifesto reads: "Have the expressionists fulfilled our expectations of an art that burns the essence of life into our flesh?—No! No! No!" Cf. Harrison and Wood (2003, 257).

and colonialists—"what had been mapped became manageable and accessible" (Pilz 2015). GIS—and the Digital Humanities in general—create standing reserves that indeed call for further ordering, i.e., interpretation, but little headway has been made in this regard for now.[19]

Being-in-the-World

The topographical turn, this processing of geographical observations into a standing-reserve that GIS is—rather than merely does—configures it as a Da-Sein in the purely representational sense. Heidegger, in his Being and Time, modified the German word 'Dasein' (Being, Existence) into 'Da-Sein' with a hyphen, a word that does not exist, but could be understood as 'being there' or 'being-in-the-world' (cf. Heidegger 1996). Says Malpas (2012, 15):

> Being and Time thus makes quite explicit that the place of thinking is itself identical with the place of Dasein's own being—with the place of existence. […] Only in the being of 'there' can the possibility of any form of question or of questioning emerge, and so the being of the question is itself essentially grounded in the being of Dasein, while the mode of being of Dasein is the mode of being of questionability.

This is another facet of Heidegger's phenomenology: that existence and reason is tied to a place. Human beings reason because of the exposure to their environment forces them to reason. Being-in-the-world induces challenges, however trivial, that in turn induce questions and knowledge production. This raises the question what tools such as Remote Sensing, GIS, and neogeography do to our thinking, given that they alter our perception of space, and thus Da-Sein.

Indeed, the claim heard most often in these fields is that they will 'revolutionize' our way of thinking, be it in general or specifically in the humanities. Trivially speaking, these digital tools inevitably change the way of thinking, because they alter the relationship with the world, with our being-in-the-world, just as any tool alters our perception of the world. Our experience of space in particular is affected, as some authors have appraised, and others have lamented about (e.g., Garfield 2012, 384). Yet, the merits that the Digital Humanities have earned in 'revolutionizing' our understanding of the humanities are few and far between. Despite the hype, digital humanities have fairly little to show for—other than in those areas that have always had an affinity to computation (i.e., quantitative methods)—in terms of new insights generated. Rather than analyzing this conundrum—I have done this in extensio in other publications—it might be more worthwhile to link this lacuna to the debates in art, and in digital art in particular.

---

[19] Olsson (2007, 120) reiterates this notion, that maps (and thus GIS) require imagination: "Therefore it can now be said: without imagination there would never be any maps, for the characteristic which maps and imaginations share in common is that they let me know not only where I am but whence I came and whither I must go." See also my interview with Olsson from 2011 (Lünen and Olsson 2013).

In the arts, and in literature, the debate over the relationship of the artist, his or her work and the audience has a long history. As a matter of fact, it was Heidegger (2002) (based on lectures he gave in 1934) who discussed this relationship and who reiterates the point made in Being and Time earlier: materiality is essential for existence and thus thinking. Says Malpas (2012, 237):

> Yet even purely conceptual works still have to work through some medium or mode of presentation, and so through something that is materially given, and the question then returns: what is the relation between that medium or mode of presentation [...] and the work itself?

This brings us right back to my initial discussion of art and authority. Dada, Readymades, and Fluxus had this debate over artists, their work and their presentation at its center.

Fluxus

An often heard objection and complaint from humanists is that digital tools are poor at representing change over time. There is a deeper issue at stake here, which I discuss in Lünen (2016), but for this chapter I would rather focus on a more positive outlook. In short, art has shown us a way out of this dilemma, i.e., how to visualize change over time. Antique sculptures feature this already by using anticipation. Greek and Roman statues often present human bodies in dynamic poses, yet they are obviously frozen in time, so how can they visualize movement? The poses the statues are in are instinctively perceived as unsustainable, i.e., they defy the laws of gravity and human experience expects them to topple over. It is this instinctive anticipation of action that makes them appear dynamic, because we expect change.[20]

It is this experience/expectation of change that is enmeshed in Bergson's and Heidegger's treatises of time as something continuous and indivisible. Space is fluid, because it is encountering changes with time. This is most visible in architecture, as Temple (2015, 237) elucidates by questioning the 'closure' of architecture, "with respect to its creative process and its experiental presence." The built environment is a dynamic space because humans' perception of it—as much as its modification—changes it over time. It is the same with artworks. Once the work is released to the public eye, the artist has no longer authority over it; the work becomes autonomous (Malpas 2012, 247). Premodern art, however, offers little to its audience to engage with this autonomy; the Mona Lisa will always be the Mona Lisa, with minimal changes in perception allowed.

Nicholas Temple refers to Eco (1989) in arguing that buildings are "temporal registers of both real and imagined settings" (Temple 2015, 239), i.e., architecture—like any human heritage—is both a snapshot of the time it was created in and an

---

[20]Just as St. Augustine (1853, 239) in the Middle Ages elaborated that there is only one time: presence. The past discloses itself through memory into a present, the present discloses itself through observation, and the presence of the future through expectation.

ongoing engagement with it. Buildings are thus not static, but fluid, in that they are constantly reinterpreted.[21] As Eco (1989, 21) argues:

> Every work of art, even though it is produced by following an explicit or implicit poetics of necessity, is effectively open to a virtually unlimited range of possible readings, each of which causes the work to acquire new vitality in terms of one particular taste, or perspective, or personal performance.

Eco (1989)—as well as Temple (2015)—furthermore, refers to Merleau-Ponty's classic text Phenomenology of Perception (1945) who raises a similar point about the incompleteness of perception in asking:

> How might anything ever be presented to us definitively, since the synthesis of it is never completed, and since I can always expect to see it break apart and pass to the status of a simple illusion? (Merleau-Ponty 1995, 345)

This resonates with Heidegger's phenomenology; even more so, both Heidegger and Merleau-Ponty argue that art and philosophy are two different strands of the same enterprise: "to disclose the essence of original perception" (Burch 1993, 360). Both had high hopes that art could achieve what philosophy could not: a presentation of this essence (along the lines that Malpas' quote from above had discussed). As indicated in the quote from Merleau-Ponty above, a presentation in philosophy is "never completed." Works of art, according to Eco's quote above, however, "acquire new vitality" from this.

Joseph Beuys and other Fluxus artists included this autonomy of the work in their art. Yoko Ono allowed the public to interact with her works, and Beuys designed works that could only function through interaction. The being-in-the-world that Heidegger spoke about is a being-with-one-another: "the everydayness of Dasein is that Being that one is. And Dasein, accordingly, is the time in which one is with one another: 'one's' time." (Heidegger 1992, 17) Beuys' happenings were thus twofold in their impetus: to symbolize the state of flux that everything was in (Berghaus 1995, 328), but also to symbolize the being-with-one-another in the work of art. Beuys' idea of the Social Sculpture—"the ongoing elaboration of collective structures" (Crowley 2013, 51)—consequently has various layers. Politically, he hoped to "unlock and mobilize people's latent creativity" (Berghaus 1995, 327), which he saw as preliminary to a truly authentic and democratic society. To unleash one's creativity, to become an artist, in Beuys' view, was to live a self-determined life, away from alienating labor (Joachimides and Rosenthal 1974, 19; Crowley 2013, 45–46). This is why Beuys frequently criticizes Duchamps, culminating in a happening titled "The Silence of Marcel Duchamps is Overrated" in 1964, for still giving the authority over the selection of art solely to the artist (Graevenitz 2007). The performative and participatory nature of the happening was thus Beuys' instance of being-with-one-another (i.e., Da-Sein), a recognition of the networked character of art and society which draws no delineation between art and life. Beuys' "Everyone an artist" is therefore

---

[21]A point the biologist and polymath JBS Haldane made in 1932 in regards to history: "Every generation must rewrite history. New facts become available, and old facts are interpreted anew." (Haldane 1986, 67).

"a widened concept of art in which the whole process of living itself is the creative act." (Tisdale 1979, 7) Consequently, Beuys increasingly set up happenings as lectures and seminars from the 1970s onwards—which is where he eventually started to contradict himself. His 'happenings' mutated into classes in which he would almost patronize his audience, and he utterly overrated the power of his ideas. On one of his several visits to Ireland (both Northern Ireland and the Republic of Ireland) in 1974, for example, he would meet with members of the Catholic community in a Belfast district, who were not pleased to be at the end of "impenetrable language" and his "elitism," and to be lectured about the benefits of education when their own parish priest was organizing educational sessions in the community center already (Rainbird 2005, 35). This is, alas, a contradiction seen in many Fluxus artists, as Frieling (2008b, 41) remarks, who "stage events" that "were ultimately driven by the artist's persona (this was the inherent paradox of Beuys's collaborative and participatory practice)."[22]

For now, another aspect in the Social Sculpture is more eminent: the ephemerality of art, i.e., the dynamic change in society, as discussed above. Beuys' art is temporal art. Not only were his happenings ephemeral in that they can be recorded, but they cannot be reproduced (You can not step into the same river twice, as Heraclitus once said). But his choice of materials also broached the subject of temporal change. His favored materials were fat and felt, but also margarine and honey featured prominently in many of his works. These fast decaying materials were often juxtaposed with rather durable matter, such as stone. With this Beuys visualized the different speeds of life, but also the tension of dynamic versus static; prime examples are his installations *Fat in the Corner* (1982) or *7000 Oaks* (started 1982, see Fig. 2.2). Some change happens rapidly, while other areas change so slowly they appear almost static. Technological change is often rapid, while social change appears to travel at a much slower pace.

This is emblematic also in the Digital Humanities: the technology has changed tremendously, but the methodology has remained quite the same for the last four decades—by and large quantitative. While there are quite a few green shoots—some of them demonstrated in this volume—where DH projects contemplate to find new ways of expression that pays tribute to the options offered by the new media, too often DH projects herald mere number crunching. Even worse, some authors—such as Guldi and Armitage (2014)—explicitly employ a regressive rhetoric: going *back*

---

[22]See Verwoert (2008) for a broader discussion of 'authority' in Beuys' work and persona. Beuys' innate desire to teach everyone got him into serious trouble at one point in his career. On 11 Oct 1972 then minister for science and research of the state of North Rhine-Westphalia Johannes Rau dismissed Beuys from his post as professor for sculpture at the Düsseldorf Arts Academy for unlawful entry. Beuys had occupied and blocked the academy's office together with persons whose applications had been rejected. Beuys declared that he would want to teach anyone applying to the academy, but the academy insisted on the law and proper procedures. Beuys saw his mission in forming society like one would form clay into a sculpture and pleaded to Rau accordingly, who replied that he cannot allow himself to be made into an object of art. Beuys' dismissal lead to protests—including a protest letter from David Hockney—and a compromise was made in which Beuys would retain his title as professor and get access to his studio in the academy, but he would no longer be employed by it (Kipphoff 1974).

Fig. 2.2 The stone slabs for the 7000 Oaks project in front of the Fridericianum in Kassel at the Documenta 1982. *Source* J. Bunse, Wikimedia Commons, CC-BY-SA-2.5

to quantitative methods, going *back* to longue durée, etc. Many DH advocates in the past have lamented that the cultural turn was mischievous, or at least detrimental, to humanistic inquiry and that scholarship should return to the pre1970s, blaming scholars who do not join in as methodologically conservative—when it is the quantitative school that is conservative.

Beuys' 7000 Oaks epitomizes this tension. A static object—a stone slab—is juxtaposed with a dynamic one—an oak tree, initially as sapling which then grows into a full-blown tree over time, while the stone slab remains unaltered (see Fig. 2.3).[23] Equally, the digital is juxtaposed with the humanities. And while the digital technol-

---

[23]The 7000 Oaks project's idea was that visitors to the Documenta 1982 could take one of the 7000 stone slabs, provided they would agree to plant an oak tree sapling next to it in a public space. Cf. http://www.7000eichen.de, accessed 29 Mar 2016. To fund the purchase of the stone slabs, Beuys convinced a pub owner in his hometown of Düsseldorf to sell him a replica of the crown of Ivan the Terrible, which Beuys would then smelter into an Easter bunny and sell on (see the Introduction). The pub owner had the replica of the crown manufactured for him to let the pub patrons drink champagne from it (for a price, of course), and the surplus that Beuys made from selling on the Easter bunny made from it paid for the stone slabs. Cf. http://www.7000eichen.de/index.php?id=28, accessed 27 Mar 2016. The bunny was sold to a collector and is now in the Staatsgalerie in Stuttgart, Germany. See http://limilee.tumblr.com/post/22383160547/berndwuersching-joseph-beuys-friedenshase-mit, accessed 27 Mar 2016.

Fig. 2.3 One of the tree/stone slab twins of the 7000 Oaks project in Düsseldorf, 2012. *Source* Kürschner, Wikimedia Commons, Public Domain

ogy and culture has grown at an astounding speed, DH methodology has conserved the methods already present in the 1950s—attempts to latch onto trends, such as Big Data, aside.[24] Beuys, on the other hand, exhibits the incompleteness of knowledge production. His works are never finished, as they constantly evolve: the oak tree keeps growing—at one point it will die and wither away—the fat continues to ferment and rot, it is chaotic (Crowley 2013, 52).[25] The main aim of the humanities has always

---

[24]On closer inspection, what has been trumpeted as "Big Data" in the Digital Humanities is actually not much more than old-school data mining. Big Data is not about size. (Jonker 2013).

[25]Actually, after Beuys died, the Arts Academy in Dusseldorf removed the Fat in the Corner (it was installed in Beuys' workshop from the time when he taught at the Academy). His former student Johannes Stüttgen then sued the Academy, as he claimed Beuys had given the sculpture to him as a gift on the day he created it. After Beuys' death in 1986 the room was not used anymore and

been to document and discuss these dynamic changes, and the desire by many DHers to produce digital resources that are, at the end of the day, static snaphots thus appears as anachronistic. Many in the DH refer to idealized omnipotent technologies, such as Vannevar Bush's Memex or Buckminster Fuller's Geoscape, as the ultimate goal.[26]

Projects to implement a World Historical GIS or a World Historical Gazetteer have been sketched and contemplated, but is this what the humanities are about? When would a World Historical GIS be finished? When would it have enough data to fulfill the claim to store the world's historical-geographical data—i.e., to become Fuller's Geoscape? Every data will be, just as maps, simply a snapshot of a particular point in time—soon to be invalidated, corrected or to expire. GIS—databases in general— with historical data will always be in flux. Data will be revised or newly interpreted; data models are already an interpretative act and thus these models will change because of the data is interpreted anew—just like the oak tree will continue growing. Fluxus art, and Beuys in particular, have engaged with this fluidity. Art in general, as discussed above, has reacted to the (technological) changes.

Ferdinand Leger, in his above quote, recognized in 1914 that cubism is just a reflection of the modern, hectic and technified world, and so is GIS in all its forms (Web GIS, mobile GIS, geospatial databases) a reflection of the postmodern, information-society geography. Digital art is about embodiment, and so is GIS. Just as art invites our imagination into a relationship with our physical environment, so do digital maps invite us to interact with and manipulate our image of the world. Where modern art was static and largely two-dimensional, postmodern art is dynamic and three- if not four-dimensional. Happenings and installations have sought to blur the line between artist and audience, just as Social Media and Crowdsourcing (such as GeoNames or OpenStreetMaps) have blurred the line between the provider and the user of (spatial) data. If the Digital Humanities actually want to be about humanities, it needs to have similar engagements—luckily, some areas already do.

Social Sculpture = Social Media?

As I have discussed so far, a number of things close to Beuys' heart are also seen in the Social Media rhetoric: participation and grassroots activism. As a matter of fact, many in the digital humanities make this the main feature of it: "[…] internet values

---

(Footnote 25 continued)

cleaners were asked by the dean to put the room into its original state. Which meant that Stüttgen found the fat in a bin, upon which he sued the Academy for 50,000 Deutschmarks, arguing that fat and room belong to one another as one sculpture and that the removal of the fat had thus destroyed it (Kirbach 1988).

[26]See Bush (1945) for the Memex, a proto-hypertext system designed to store the world's knowledge; and Fuller (1981, 163ff) for a sketch of his Geoscape where "The Geoscape's electronic computers will store all relevant inventories of world data arranged chronologically, in the order and spacing of discovery, as they have occurred throughout all known history." (Fuller 1981, 180).

[…] infuse the digital humanities." (Spiro 2012, 22)[27] This resonates with the often echoed assessment that Social Media are the epitome of "Power to the People" and that they would do away with the gatekeepers in information and communication—the Public Sphere Habermas (1992) had advocated.

This hype over Social Media has found its critics, obviously, just like computer culture and the Internet found theirs.[28] The idea that "[…] the web of the 1990s was primarily a publishing medium, in the 2000s it has increasingly became [sic] a communication medium" (Manovich 2008, 68) has been reiterated time and again. Yet, the same high hopes were present in the advent of radio and TV—or Fluxus art for that matter. Dada and Fluxus saw themselves as "Art2.0." Art 1.0 was the conventional art that was put into galleries for people to consume, but Art 2.0—participatory art—was about a communicative process between artwork, artist and audience. Alas, it was not to be. The works of Joseph Beuys are nowadays put into, and sold from, galleries at the usual exorbitant prices; whether they induce some kind of communication with the audience other than what Art 1.0 had already done is questionable.[29] Likewise, what Bertolt Brecht wrote in 1932 about (two-way) radio holds true for much of the Social Media as well:

> *Suddenly there was the possibility to say everything to everyone, but upon reflection there was nothing to be said.* […] One looked around where somewhere something was being said to someone and simply tried to butt in and compete by also saying something to someone.[30]

Not only have authors such as Lovink (2012) or Fuchs (2014) criticized Social Media for not being as decentralized and prosumerist as promised,[31] but Atkins (2008, 62) also questions the very notion of participation that is at the core of the Web 2.0:

> […] new media-style audience participation invariably involves acts performed in solitude. Little, after all, separates voting for a favorite contestant on American Idol from pledging dollars to the Democratic or Republic [sic] National Committee online. Not much time or effort is required for either.

This somehow echoes (Himmelfarb (1996) criticism mentioned above—and ultimately (Heidegger (1977), also discussed above. Participation has become a standing-reserve, a commodity that does not require deep reflection (i.e., conscious approval) but produces indifference.

---

[27]As a matter of fact, the Digital Humanities Manifesto 2.0 (http://www.humanitiesblast.com/manifesto/Manifesto_V2.pdf, accessed 30 Mar 2016) may as well have been written by Joseph Beuys would he still be alive.

[28]I have myself taken a "middle-of-the-road" stance in stating that Social Media can have their benefits, but are rather superficial most of the time (Lünen 2015).

[29]Even more ironically, Yoko Ono's *Painting to Hammer a Nail In* in Fig. 2.1 in the MCA exhibition had a little sign beside it saying "Please Do Not Touch."

[30]Bertolt Brecht, *The Radio as Communication Apparatus*, 1932 (Silberman 2001, 41).

[31]The neologism "prosumer" was coined by Toffler (1980) to describe the merger between producer and consumer in media studies. The general idea had been discussed before in various contexts though, not least in Fluxus art.

Social Media in this regard are Beuys' Social Sculpture insofar as both have had an overstated agenda that was impossible to fulfill from the start. For Beuys, art was supposed to replace politics; once people would realize their creative potential they would have no more need for politics, as there would be no more grudges (cf. Beckmann 2001, 95; Berghaus 1995, 327; Joachimides and Rosenthal 1974, 19). Similar high hopes of political change have been garnered by Social Media advocates, and the so-called "Arab Spring" is often cited as prime example. But not only has the outcome of these uprisings in 2011 muddled this narrative, but scholars have doubted the role of Social Media played in this (e.g., Murthy 2013, 95, 112).

Maybe the issue is that these new media—or technology in general—are moving so fast that such grand concepts are quickly swept aside. So quickly in fact that it escapes a scholarly treatment. Says Lovink (2012, 7):

> Ever since the early 1990s, user cultures have emerged from nowhere, and researchers cannot anticipate or synthesize the speed with which these large structures come and go. User cultures long surpassed the imagination of IT journalists, and society is way ahead of its theorists (including this author). The response is either to panic or to leave the topic of new media altogether. The object of study is in a permanent state of flux and will disappear shortly – the death of everything cannot be denied.

Which, somewhat ironically, brings us back full circle to—in my eyes—Beuys' main contribution: the perception and visualization of dynamic change. Media and their consumption change rapidly while scholars and their methods remain static; Fuchs (2014), for example, uses nineteenth and early twentieth century scholars such as Durkheim, Marx, Weber and Tönnies to make his case—and I use Heidegger and Bergson. Maybe social change is so rapid nowadays that its discussion is like Schrödinger's Cat: dead and alive at the same time.[32] It seems as if we are unable to relate debates to our own time: modernism debated the premodern (or what it perceived as such) and postmodernism debated modernism. There has yet to emerge a post-postmodernism that debates the postmodern society.

---

[32]The German physicist Erwin Schrödinger devised a thought experiment in the 1920 s to illustrate the tantalizing insights from quantum physics and to reason about the validity of scientific observations. He envisioned a cat being put in a closed, intransparent container together with a vial full of poison gas. The vial might be tipped over at any moment either by movement of the cat, by vibration from the outside, or simply because of a random molecular event—thus breaking and killing the cat. However, we would not know because we cannot see the cat in the box, and opening it might actually cause the event we are trying to check on (the toppling of the vial). The observer of an event is thus part of the observed phenomenon and the observation therefore not neutral/valid. As we can have no knowledge of the cat's state, Schrödinger argued that it is dead and alive at the same time, as the likelihood for both is equally high, and there is no objective way of proving either way. (Cf. Davies 2003, 199–202).

Conclusions: Stop Making Sense

There is much to be said about digital art, social media, and the digital humanities. As I have tried to point out, scholarly engagements with them appear as almost futile, as they are in a constant state of flux. Which is why the digital humanities have escaped scholarly scrutiny for so long.[33] Digital art, on the other hand, seems to be ahead of the digital humanities. Computer art, as it was known in the 1960s—similar to the term 'humanities computing' that has fallen out of fashion (worth a discussion in its own right, but beyond the scope of this chapter)—was similarly attacked and criticized as the digital humanities are (not least by this author). Art critics and others not only called into question the aesthetic and artistic value of computer art, for most of it well into the 1990s was merely boring patterns, but more importantly the very notion of computer art was ostracized: why is an art style defined by its medium? There has been Impressionism, Cubism or Surrealism, but no oil painting art or copper engraving art (cf. Piehler 2002, 11–12). Likewise, digital humanities differ from the humanities in what way?

Digital art and network art is now firmly established, and it may be an idea for the digital humanities to take a leaf out of the artists' book, first and foremost to learn about an alternative approach. As I mentioned in this chapter (and many other places) the tying to quantitative methods, as a reference to the scientific paradigm, is doing the digital humanities no favors. The main issue with them, as I have tried to elaborate in this chapter, is the inaptness of digital technology to deal with the ephemeral and immaterial nature of the kind of contingency that the humanities are interested in.

Given that to use digital tools one has to find a way to cast this contingency into discrete units (by way of mathematical mapping), the question then arises if this sort of mapping—from a contingent, social space into a Cartesian one—alters the contingency to such an extent that it can no longer be considered the object of humanistic inquiry, but rather of scientific inquiry.

Ryder (2013) explored this question in the context of art, and I believe his discussion offers much food for thought for the Digital Humanities as well. As he points out, all computers can handle in the end is based on propositional logic (Ryder 2013, 165), i.e., assertions, as manifested in Boolean logic. Ryder also outlines that knowledge is usually seen as a result of rational investigation (Ryder 2013, 144), i.e., the scientific paradigm. Now, obviously, things like history are hard—if not impossible—to map to a propositional calculus, as the historical processes are usually so complex that they are impossible to map to true/false binaries. Also, historical knowledge "ages"; under propositional logic, a statement once to be found true or false will remain true or false.

As I have discussed throughout this chapter, this is not something the humanities are usually ready to accept. There is thus a kind of knowledge produced in scholarship that is not propositional, just as Ryder (2013, 142) elaborates in the context of art:

---

[33]There is yet another angle on the ephemeral nature in the Digital Humanities: sustainability. Too many projects/resources vanish after their funding ceases.

"[…] if nature is not to be reduced to material objects and processes alone, then there is no reason to think that the methods of the natural sciences represent the only cognitive access to nature."

Rather, as Ryder (2013, 165) elucidates, "art is a form of judgement that is not propositional and therefore not assertive." I think this holds true for much of the humanities as well, and it poses the question how digital tools may help in facilitating scholarship then, which I discussed in Lünen (2013).

I indeed believe that art—digital or not—can lead the way here. Many of Beuys' works have their value—in my opinion—not in his idea of Social Sculpture, but in their spatiotemporal aspect. Digital humanists often lament that digital tools are quite incapable to visualize change over time. Beuys, and other artists, have managed to do this. The key seems to be the tangibility of the process, as I have discussed in Lünen (2013)—in reference to Schlögel (2009, 272)—scholars would be well advised not to exclude the sensual/phenomenological aspects of space, a tendency generally facilitated by digital tools.[34]

A similar point was made by Susan Sontag in 1964 in her famous essay Against Interpretation, picked up by Lovink (2012, 61) in relation to Social Media. "What is important now", Sontag (1987, 14) wrote, "is to recover our senses. We must learn to see more, to hear more, to feel more." Indeed, the digital humanities should turn their attention to build tools to support our experience(s) of humanistic matters. Said Sontag (1987, 14): "In place of a hermeneutics we need an erotics of art." Thus, I will revise my call from Lünen (2013), reiterated above: instead of a hermeneutics of topography we need an erotics of topography.

References

Adorno TW (1978) Minima moralia: reflections from damaged life. Verso, London, translated from the German by E. F. N. Jephcott

Alweiss L (2002) Heidegger and 'the concept of time'. History Hum Sci 15(3):117–132

Atkins R (2008) Politics, participation, and meaning in the age of mass media. In: Frieling (ed), pp 50–65

Beckmann L (2001) The causes lie in the future. In: Ray G (ed) Joseph Beuys: mapping the legacy. Distributed Art Publisher, New York, pp 91–111

Berghaus G (1995) Happenings in Europe: trends, events, and leading figures. In: Sandford MR (ed) Happenings and other acts. Routledge, London and New York, pp 310–388

Bergson H (1988) Matter and memory (trans: Margaret Paul N, Scott Palmer W). Zone, New York

Borchardt-Hume A (ed) (2014) Malevich. Tate Publications, London

Bullough VL (1966/67) The computer and the historian—some tentative beginnings. Comput Hum 1:61–64

Burch R (1993) On the topic of art and truth: Merleau-Ponty, Heidegger, and the transcendental turn. In: Johnson (ed), pp 348–370

Bush V (1945) As we may think. The Atlantic Monthly 176(1):101–108

---

[34]Ramos' chapter in this book nicely demonstrates the linkage between the virtual and the physical world.

Cherix C (2015) Yoko Ono's lightning years. In: Biesenbach K, Cherix C (eds) Yoko ono: one woman show 1960–1971. The Museum of Modern Art, New York, pp 11–20

Crowley M (2013) Bernard Stiegler goes seal-hunting with Joseph Beuys. Forum Modern Lang Stud 49(1):45–59

Davies EB (2003) Science in the looking glass: what do scientists really know?. Oxford University Press, Oxford

Dreyfus HL (2006) Heidegger on the connection between nihilism, art, technology, and politics. In: Guignon CB (ed) The Cambridge companion to Heidegger, 2nd edn. Cambridge University Press, Cambridge, pp 345–372

Eco U (1989) The open work (trans: Cancogni A). Harvard University Press, Cambridge

Edwards PN (1996) The closed world: computers and the politics of discourse in cold war America. MIT Press, Cambridge

Elias N (1994) Time: an essay, reprint edn. Blackwell, Oxford (translated in part from the German by Edmund Jephcott)

Frieling R (ed) (2008a) The art of participation: 1950 to now. Thames & Hudson, New York

Frieling R (2008b) Toward participation in art. In: Frieling (ed), pp 32–49

Froman WJ (1993) Action painting and the world-as-picture. In: Johnson (ed), pp 337–347

Fuchs C (2014) Social media: a critical introduction. SAGE, London

Fuller RB (1981) Critical path. Martin Press, New York

Garfield S (2012) On the map: why the world looks the way it does. Profile, London

Av Graevenitz (2007) Breaking the silence: Joseph Beuys on 'Challenger', Marcel Duchamp. In: Mesch C, Michely VM (eds) Joseph Beuys: the reader. Tauris, London, pp 29–49

Guerlac S (2006) Thinking in time: an introduction to Henri Bergson. Cornell University Press, Ithaca & London

Guldi J, Armitage D (2014) The history manifesto. Cambridge University Press, Cambridge

Habermas J (1976) Legitimation crisis. Heinemann, London

Habermas J (1992) The structural transformation of the public sphere: an inquiry into a category of bourgeois society (trans: Burger T, Lawrence L). Polity, Oxford

Haldane J (1986) On being the right size. And other essays. Oxford University Press, Oxford

Halpern O (2014) Beautiful data: a history of vision and reason since 1945. Duke University Press, Durham (NC)

Harmon KA (2009) The map as art: contemporary artists explore cartography. Princeton Architectural Press, New York

Harrison C, Wood P (eds) (2003) Art in theory 1900–2000. An anthology of changing ideas, new, ed edn. Blackwell, Oxford

Heidegger M (1977) The question concerning technology and other essays. Harper Torchbooks, New York

Heidegger M (1992) The concept of time (trans: McNeill W, Original from 1924). Blackwell, Oxford

Heidegger M (1996) Being and time: a translation of *Sein und Zeit* (trans: Stambaugh J). State University of New York Press, Albany

Heidegger M (2002) The origin of the work of art. In: Young J, Haynes K (eds) Off the beaten track. Cambridge University Pres, Cambridge, pp 1–56

Hendricks J (2013) Yoko Ono and Fluxus. In: Pfeiffer I, Hollein M (eds) Yoko Ono: half-a-wind show—a retrospective. Prestel, Munich/London/New York, pp 53–85

Himmelfarb G (1996) A neo-luddite reflects on the internet. Chronicle High Educ 43(10):A56

Hitchcock T (2008) Digital searching and the re-formulation of historical knowledge. In: Greengrass M, Hughes L (eds) The virtual representation of the past. Ashgate, London, pp 81–90

Husserl E (1970) The crisis of European sciences and transcendental phenomenology: an introduction to phenomenological philosophy (trans: (with an Introduction) Carr D). Northwestern University Press, Evanston

Joachimides CM, Rosenthal N (1974) Art into society—society into art. Institute of Contemporary Art, London

Johnson GA (ed) (1993) The Merleau-Ponty aesthetics reader: philosophy and painting. Northwestern University Press, Evanston

Jonker D (2013) Big data is not about size. Digit Mag. http://www.digitalistmag.com/technologies/big-data/2013/03/21/big-data-is-not-about-big-data-028590. Accessed 27 Mar 2016

Kipphoff P (1974) Mancherlei Recht Der fall Joseph Beuys. Die Zeit 43:32

Kirbach R (1988) Kunst im Eimer. Beuys' 'Fettecke' weggeputzt. Die Zeit (46):20

Léger F (1973) Functions of painting. Thames and Hudson, London

Lünen Av (2013) Tracking in a new territory: re-imaging GIS for history. In: Lünen A, Travis (ed), pp 211–239

Lünen Av (2015) Social media can assure in times of disaster—much like radio in the 1920s. The Conversation. https://theconversation.com/social-media-can-assure-in-times-of-disaster-much-like-radio-in-the-1920s-50829. Accessed 30 Mar 2016

Lünen Av (2016) So long, and thanks for the GIS: digital spatial history. In: Griffiths S, Lünen Av (eds) Spatial cultures: towards a new social morphology of cities past and present. Routledge, London

Lünen Av, Olsson G (2013) Thou Shalt Make No Graven Maps!: an interview with Gunnar Olsson. In: Lunen A, Travis C(eds), pp 73–87

Av Lünen, Travis C (eds) (2013) History and GIS: Epistemologies, considerations and reflections, Springer, Dordrecht

Lovink G (2012) Networks without a cause: a critique of social media. Polity, London

Lundmark L (1993) The mechanization of time. In: Haken H, Karlquist A, Svedin U (eds) The machine as metaphor and tool. Springer, Berlin, pp 45–66

Malevich K (1968) Essays on art, vol 1: 1915–1933, Rapp and Whiting, London, Chap. The suprematist mirror, pp 224–225

Malpas J (2012) Heidegger and the thinking of place: explorations in the topology of being. MIT Press, Cambridge

Manovich L (2008) Art after Web 2.0. In: Frieling (ed), pp 66–80

Marx K (1974) Economic and philosophic manuscripts of 1844, 4th edn. Progress Publishers, Moscow

Masterman M (1962) The intellect's new eye. In: NN (ed) Freeing the mind: articles and letters from the times literary supplement during March-June, 1962, Times, London, pp 38–44

Merleau-Ponty M (1995) Phenomenology of perception. Taylor and Francis, London

Mulhall S (1996) Heidegger and being and time. Routledge, London

Mumford L (1967) Technics and civilization, ninth, impression edn. Routledge and Kegan Paul, London

Murthy D (2013) Twitter: social communication in the Twitter age. Polity, Cambridge

Olsson G (1999) Constellations. Sistema. Terra 8(1–3):140–144

Olsson G (2007) Abysmal: a critique of cartographic reason. University of Chicago Press, Chicago

Pearson KA (2002) Philosophy and the adventure of the universal: Bergson and the time of life. Routledge, London and New York

Piehler HM (2002) Die Anfänge der Computerkunst. dot, Frankfurt/M

Pilz M (2015) Der Terror der Topografie. WELT Online. http://www.welt.de/146536193. Accessed 20 Oct 2015

Rainbird S (2005) Joseph Beuys and the Celtic World: Scotland, Ireland and England 1970–85. Tate Publishing, London

Ryder J (2013) Things in heaven and earth: an essay in pragmatic naturalism. Fordham University Press, New York

Schlögel K (2009) Im Raume lesen wir die Zeit. Über Zivilisationsgeschichte und Geopolitik, 3rd edn. Fischer, Frankfurt/M

Schmale W (2010) Digitale Geschichtswissenschaft. Böhlau, Wien/Köln/Weimar

Silberman M (ed) (2001) Bertolt Brecht on film & radio. Methuen, London

Sombart N (1992) Nachrichten aus Ascona. Auf dem Wege zu einer kulturwissenschaftlichen Hermeneutik. In: Prigge W (ed) Städtische Intellektuelle. Urbane Millieus im 20. Jahrhundert, Fischer, Frankfurt/M., pp 107–117

Sontag S (1987) Against interpretation. And other essays, Andre Deutsch, London, Chap. Against interpretation 1964, pp 3–14

Spiro L (2012) 'This Is Why We Fight': defining the values of the digital humanities. In: Gold MK (ed) Debates in the digital humanities. University of Minnesota Press, Minneapolis, pp 16–35

St Augustine (1853) The confessions. John Henry Parker, Oxford

Temple N (2015) Unfinished architecture: urban continuity in the age of the complete. In: Mindrup M (ed) Material imagination: reveries on architecture and matter. Ashgate studies in architecture. Ashgate, Farnham

Tisdale C (1979) Joseph Beuys. Thames and Hudson, London

Toffler A (1980) The third wave: the classic study of tomorrow. Bantam, New York

Verwoert J (2008) The Boss: on the unresolved question of authority in Joseph Beuys' Oeuvre and public image. e-flux (1). http://www.e-flux.com/journal/the-boss-on-the-unresolved-question-of-authority-in-joseph-beuys%E2%80%99-oeuvre-and-public-image/. Accessed 27 Mar 2016

Wagner P (1998) Sociological reflections: the technology question during the first crisis of modernity. In: Hård M, Jamison A (eds) The intellectual appropriation of technology. Discourses on Modernity 1900–1939, The MIT Press, Cambridge, pp 225–252

Weinhart M (2009) The making of art. In: Weinhart M, Hollein M (eds) The making of art. Frankfurt/M, Walther König, pp 54–61

Willett J, Manheim R (eds) (1976) Bertolt Brecht: Poems 1913–1956. Methuen, London

Wood D (2006) Map art. Cartogr Perspect 53:5–14