

THE EMERGENCE OF THE DIGITAL HUMANITIES

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Chapter 1 EVERSION

*Cyberspace, not so long ago, was a specific elsewhere, one we visited periodically, peering into it from the familiar physical world. Now cyberspace has everted. Turned itself inside out. Colonized the physical. (William Gibson, 2010)*¹

The eversion of cyberspace, or the shift in perception it metaphorically describes, has actually been going on for some time, now. When Gibson coined the term cyberspace in 1982–1984, it was a metaphor for the global information network, but in the decade that followed, it made a material difference in technology and culture, and in the perceived relation between the two. Now, as Gibson and others have recently noted, the term has started to fade like an old photograph, to sound increasingly archaic.² In a Twitter exchange on November 27, 2011, @scottdot asked “Who the hell says ‘cyber’-anything anymore?” and in a few minutes Gibson himself (@GreatDismal) responded: “I have said that myself, many times.” The notable exceptions, perhaps significantly enough, are uses of the term by the military and governments, as in cyber-attack and cyber-warfare, and in the analogous case of cyber-bullying. In all of these cases, one might imagine that there’s a resistance to acknowledging the (frightening) breakdown of the distinction, the penetration of what had been conceived of as separate worlds. Even in this case, the Department of Homeland Security Deputy Secretary, Jane Holl Lute, began her testimony before a congressional committee on cybersecurity in March 2013 by observing that “[c]yberspace is woven into the fabric of our daily lives;” and she has said repeatedly (in a paradoxical-sounding metaphor) that cyberspace “functions as the very endoskeleton of modern life.”³ No longer a place apart (some other “space”), it’s now seen as the infrastructure inside the “body” of everyday existence. For some years now, Gibson has been pointing out that “cyberspace is everywhere now, having everted and colonized the world. It starts to sound kind of ridiculous to speak of cyberspace as being somewhere else.”⁴ Although she continues to use the term, Secretary Lute would agree with Gibson that cyberspace has everted, turned inside out (and outside in).

In one sense, Gibson is just overwriting his own earlier metaphor (cyberspace) with a newer one (eversion). But despite his claim that “cyberspace is everywhere, now,” in fact, as one of his characters says in the 2007 novel, *Spook Country*, there never was any cyberspace, really. It was just a way of understanding the culture’s relationship to networked technology, in other words, a metaphor. As that relationship changed, so did the metaphor. Of course, most of the time people don’t go around measuring in figurative terms their shifting attitudes toward technology. Everyday technology is experienced in more literal, concrete terms. For increasing numbers of people, networked technology is becoming an integral part of everyday life they take for granted—and that’s the point. The metaphor of eversion is particularly resonant, particularly useful, because it articulates a widely experienced shift in our collective understanding of the network during the last decade: inside out, from a world apart to a part of the world, from a transcendent virtual reality to mundane experience, from a mysterious, invisible abstract world to a still mostly invisible (but real) data-grid that we move through every day in the physical world.⁵ If cyberspace once seemed a transcendent elsewhere, someplace other than the world we normally inhabit, that relationship has *inverted* as the network as *everted*. In a 2009 interview, Gibson described the eversion in this way: The ubiquitous connectivity that we’re all taking very much for granted, and are increasingly depending on, has become our Here. And the disconnected space, you know, when you can’t get your WiFi to link up, or when your cellphone won’t work, that’s become our There.⁶

The network is no longer normally imagined as a place you jack into in order to upload your disembodied consciousness, a place you “visit” as if it were another planet. It’s right here all around us, the water in which we swim. Moreover, we made it, or at least we contribute our own data to it daily, whether fully aware or fully consenting or not.

The term *eversion* is unusual, with medical and surgical associations appearing early (in which inner surfaces—of the eyelid, for example—are turned inside-out) and as the terms for a rhetorical figure in the seventeenth century (also called *eparedos*), in which a sequence of words or phrases is turned around and repeated in reverse order (according to the *Oxford English Dictionary*). Gibson himself first used a form of the term in print in a poem published in 1992, “Agrippa” (as we’ll see in chapter 3). There it simply described an umbrella turned inside out by the wind in Japan (“umbrella everted in the storm’s Pacific breath”). It’s perhaps interesting, however, that Gibson’s initial use of the word was to describe a physical object out in the weather. By 2007 he used it as a metaphor for the digital network’s turning-out-into the physical, out into the world. More recently, in 1999, Marcos Novak, who is a theorist and practitioner of “virtual architecture,” used the term eversion in roughly the same way as Gibson later would.⁷ Novak begins with the premise that “we are tending toward a culture of ubiquitous virtuality,” a state beyond cyberspace and virtual reality. Novak argues, however, that the concept of immersion by itself is incomplete, that it “lacks a complementary concept describing the outpouring of virtuality onto ordinary space”

(309, 311). That missing concept is eversion—"the obverse of immersion" (311). Novak's anticipates Gibson's use of the term in a number of ways, even before the implications of newer networked technologies in the new millennium were fully evident. He uses the same spatial metaphor, for example: "Eversion ... signifies a turning inside-out of virtuality, a casting outward of the virtual into the space of everyday experience" (311). And Novak grasps what will become in the 2000s the crucial point of the eversion of cyberspace—the shift of focus to the everyday and to physical space: "the phenomena we are familiar with in cyberspace will find, indeed are finding, their equivalent, everted forms in ordinary space" (312).

For Novak at the time, the shift was primarily conceptual. He had not yet seen the eversion embodied in the banal ubiquity of mobile technology, or even of widespread and free, or inexpensive, fast wireless Internet connections. As a visionary architect, however, Novak was however used to modeling and thinking with imaginary objects, design fictions, including in his case hyperspatial or multidimensional structures that figure eversion in graphical terms. Furthermore, he was interested in design based on metaphors, and in what he calls the "poetics of new technologies" (309). For Novak, eversion is a concept for *more precisely imagining* "the cultural and poetic circumstances brought about by the exponential growth of information technology" (312). Since those early speculations, in a 2008 exhibit for example, Novak has explored the idea "that we live in a new sort of space, encompassing the actual and the virtual, and using the invisible as a bridge and interface between the two"—a formulation that sounds much like the mixed-reality state of the eversion as I'll be characterizing it.⁸ Again, as an architect working in an auspicious time, Novak connects that experience to objects in space, what he calls "turbulent topologies," and a sense of being surrounded by "strange geometries." I'll come back in the next chapter to that sense of the eversion as exposing weird, heretofore hidden dimensions of experience, and to the seemingly contradictory sense that the network is mundane, a fact of life all around us, but somehow still redolent of an otherness associated with its former existence as cyber-spatial. This double sense is what characterizes our moment of transition, of the eversion still in the process of working itself out and becoming more widely distributed.

In fact William Gibson is often credited with saying that the future is already here, it just isn't evenly distributed.⁹ There's a sense in which what Novak sensed with his future-oriented theoretical antennae around the turn of the century took a few years to be experienced by the preponderance of users. And that process continues. But I think we can roughly date the watershed moment when the preponderant collective perception fundamentally changed to 2004–2008. At about that historical moment the quintessential virtual world, Second Life, arguably peaked, was more or less taken for granted just as it began to decline, in terms of number of users and—more important—in terms of the publicity surrounding it as *the* paradigm platform for the future of the Internet as a whole.¹⁰ At around the same time, the idea that the network itself was essentially a virtual world, a *second* life, lost some of its power as network technology became increasingly intertwined with everyday activities. The MMORPG (massively multiplayer online role-playing game) *World of Warcraft* was taking off at the same time as a mainstream entertainment, but the interface for that game was decidedly video game-like in its mixed menus, chat, and 3D graphics. The experience of playing it for many people, with their headsets on, talking to their guild, was closer to using social-network software than to immersive virtual reality as it had been imagined in the era of cyberspace during the 1990s.

Speaking of games, at about the same time, Nintendo's motion-control Wii was introduced (2006) helping to usher in an era of mixed-reality casual gaming, matched only by the rapid rise of mobile gaming. The same massive increase in the use of mobile technologies contributed to the success of the so-called Web 2.0 social-network platforms introduced at the time, especially Facebook. As I pointed out in the Introduction, Facebook first appeared around 2004 (Myspace had preceded it by about a year), but it came into its own, reaching a mass user base, in 2006–2007—just in time to be joined by the microblogging platform Twitter in 2006. Geolocative social-network platform Foursquare, in which used check in to real-world locations using GPS, debuted in 2009. Indeed, as the work of Jason Farman (among others) has shown, the rise of mobile computing is in itself another way to characterize the shift I'm calling the eversion.¹¹ Farman sees the rise of mobile media as a significant "cultural shift" and a force that produces and reconfigures "social and embodied space;" his work focuses on "the embodied and spatial actions to which our devices contribute" (1, 5, 2). The timeline of eversion, therefore, is marked by the appearance of Apple's iPhone, for example, which was previewed in 2006 and introduced in January 2007; the Android OS and phones followed within a year.

Early in 2007, William Gibson's novel *Spook Country* was published, in which he first articulated the eversion of cyberspace.¹² Set in 2006, its story is based on the rise of mobile network access (though everyone in the book still flips their cellphones open and closed, rather than poking at a multitouch interface, a telling detail that dates the writing to the just-pre-iPhone era), and on the related confluence of augmented reality, locative art, viral marketing, pervasive surveillance, and the total security state. Like what happens in the novel (and the one that preceded it in the trilogy, *Pattern Recognition*), the novel itself is an act of "coolhunting," a report from the interface of culture and networked technology. Characters in the novel execute works of art (and a direct-action protest) by leveraging the cellular data networks, GPS satellite data, and the mobile and wireless Web to tag or annotate the physical world, overlaying locations with data of various kinds, including surreal

3D artists' images. The novel presents a media landscape in which the mundane trumps the transcendent, but it's a mundane with a difference, and the difference is distributed and mobile networked data. In *Spook Country*'s vision of 2006, already there isn't any cyberspace out there, because the network is down here, all around us. The book is about streets and buildings, shipping containers and remote-control drone aircraft, pills, guns, and religious fetish objects, objects of all kinds, because that's where the network lives, now, as data and sensors and connections, built into and surrounding the myriad physical objects that make up the ambient world.

This condition, what Gibson calls the eversion of cyberspace, corresponds to a shift noted by a number of media-studies specialists working in different disciplines, what Katherine Hayles, for example, has identified as a fourth phase in the history of cybernetics (which began in its modern form with information theory in the mid twentieth century), from "virtuality" to "mixed reality," to "environments in which physical and virtual realms merge in fluid and seamless ways."¹³ This is the most recent shift in what Hayles sees as the history of cybernetics, moving from homeostasis (1943–1960), to reflexivity (1960–1985), to virtuality (1985–1990s), and now, to mixed reality: "A decade or two ago there was much talk of virtual realms as 'cyber' locations distinct from the real world," she says, as embodied in the VR helmet of the 1980s. Such rigs have been replaced, now, by the graphical user interfaces (GUIs) of computers of various form-factors, increasingly experienced via the "pervasiveness, flexibility, and robustness of ubiquitous media."

Instead of constructing virtual reality as a sphere separate from the real world, today's media have tended to move out of the box and overlay virtual information and functionalities onto physical locations and actual objects. Mobile phones, GPS technology, and RFID (radio frequency identification) tags, along with embedded sensors and actuators, have created environments in which physical and virtual realms merge in fluid and seamless ways. This fourth phase is characterized by the integration of virtuality and actuality that may appropriately be called mixed reality. (Hayles 2010, 148).

The history of cybernetics for Hayles began with information being separated from its material "body," being treated as a mathematical abstraction. This has had the effect of a general emphasis on disembodiment that Hayles' earlier work explicitly addressed. The mixed reality model, however, emphasizes the role of human and machine within complex environments "though which information and data are pervasively flowing" (149). In other words, like Gibson, she recognizes in this 2010 essay that what was once imagined as a realm apart is now discovered all around us in the physical world, as information and data are seen as complexly material phenomena, everywhere embodied.

To cite another example: in 2006, at the time that Gibson was writing *Spook Country* (just before it was published, although excerpts had appeared on his blog), Adam Greenfield used terms much like Gibson's to describe what he called the condition of "everyware," a "paradigm shift" around 2005 to ubiquitous or pervasive computing.¹⁴ This new distributed network offers a radical alternative to "immersing a user in an information-space that never was"—and amounts to "something akin to *virtual reality turned inside out*" (my emphasis) (73). Writing from the point of view of technology design, Greenfield cites *Neuromancer* for the earlier paradigm. In cyberspace, he says, the "nonspace of the interface" made it feel as though "each of our boxes [personal computers] [was] a portal onto a 'consensual hallucination' that's always there waiting for us" (72). By contrast, so-called everyware works by "instrumenting the actual world, as opposed to immersing the user in an information-space that never was" (73). Moreover, the new everyware network "happens out here in the world" and is a social phenomenon (16). Science fiction like Gibson's still plays an important role. Greenfield notes that "in everyware pop culture and actual development have found themselves locked in a co-evolutionary spiral," and he cites for example movies and science fiction novels, as well as literary fiction, such as work by David Foster Wallace and Don DeLillo, as imaginative representations of ubiquitous computing of the kind actually being developed in the 2000s (93–95). Recognizing this effect doesn't require subtle cultural-studies methods. As he reminds us, sometimes audience members of imaginative films representing technology, for example the interfaces of *Minority Report*, "go on to furnish the world with the things they've seen;" in that way the "fantastic" is quite literally "made real" (95). In fact, as I'll argue in the chapters to come, the central role of fictional designs or deliberate "design fictions," and their closeness to being translated into actual, physical prototypes, is one of the features of the eversion, one of the ways the (imagined) virtual and physical are linked, not dual, separate realms, but two possibility states, always already available.

In a Foreword to Beth Coleman's *Hello Avatar*, Clay Shirky praises her analysis of the network as finding a "means to escape the seeming incommensurability of two competing models"—the network as cyberspace and the network as a medium for social communication in the real world.¹⁵ Her preferred framing concept, which sets aside or avoids the presumed dualism, is "x-reality," "x-media" or "cross-media," a "landscape" held together for us by our construction of identities (avatars), and as Shirky says, it "crosses from the real to the mediated world and back" (xiii). In her own words, Coleman declares that she sees "an end of the virtual and the acceleration of the augmented" due to "the growing phenomenon of pervasive media engagement" (2–3). Augmented or "x-reality," Coleman says, "traverses the virtual and the real" (3).

One more important example is the public writings of sociology student Nathan Jurgenson (a PhD candidate in Sociology at the University of Maryland), who in the past few years has argued in various venues against what he calls “digital dualism,” the fallacy that “the digital and the physical are separate,” and in favor of recognizing instead that “the digital and physical are increasingly meshed” in augmented reality.¹⁶ Jurgenson’s arguments about the network overlap with my own in many ways. He writes in response to what he sees as “the fetishization of the offline,” which he associates with retro fashions for analog media, for example, and a persistent ideology of cyberspace as a place apart.¹⁷ Against the analog backlash based on digital dualism, Jurgenson asserts that:

Our lived reality is the result of the constant interpenetration of the online and offline. That is, we live in an augmented reality that exists at the intersection of materiality and information, physicality and digitality, bodies and technology, atoms and bits, the off and the online. (“The IRL Fetish”)

This argument by Jurgenson (and others at the Cyborgology blog in particular) attracted the criticism of Nicholas Carr, author of *The Shallows: How the Internet Is Changing the Way We Think, Read and Remember*, who wrote his own blog post February 27, 2013 against what he called the “digital dualism denialism.”¹⁸ Carr equates offline existence with a pre-technological, more natural way of life: “We should celebrate the fact that nature and wilderness have continued to exist, in our minds and in actuality, even as they have been overrun by technology and society.” The constructedness of the idea of “nature” for the past 200 years—especially in reaction to the industrial revolution—and the presence in the “wilderness” of machines and technologies of various kinds for much longer than that, is glossed over in Carr’s account, revealing the very kind of idealization of “offline” life Jurgenson was addressing in the first place. But Carr’s call for “thinking more deeply about people’s actual experience of the online and the offline and, equally important, how they sense that experience” is I think useful. It’s true that at times Jurgenson’s rhetoric can sound like simple debunking rather than deconstruction, as if it’s merely a matter of exposing digital dualism as a silly illusion. He has, I think rightly, said that “[t]he clear distinction between the on and offline, between human and technology, is queered beyond tenability” (“IRL Fetish”).

But, as with other forms of queering, that doesn’t mean that the relational constructions of digital and physical suddenly come to an end and are resolved into a unity, now that they are less stable, fixed, or natural categories. It certainly doesn’t mean that people *no longer experience them as mutually co-constructed*, as defined by differences that cannot quickly be resolved into easy unities. In one marginal note to one of the essays I’ve been citing, Jurgenson qualifies his own polemic: “To be clear, the digital and the physical *are not the same*, but we should aim to better understand the relationship of different combinations of information, be they analog or digital” (“The IRL Fetish”). Agreed. In this book, I’m deeply interested in pursuing that kind of better understanding of the relationship of digital and analog, in part by looking (as Carr suggests) at how people “sense” their experience of this relationship. I begin by reading the metaphorical significance carried in expressions of digital dualism, and by interpreting the *shift* from one dominant metaphor (cyberspace) to another. That shift characterizes the eversion for me, the move toward what Jurgenson calls enmeshed or augmented reality, what Coleman calls x-reality, what Greenfield calls everywhere, and what Hayles calls mixed reality. So, as I further explain in the next chapter, I’m less interested in debunking cyberspace as a transparent illusion than I am in exploring what, after having had such a profound cultural influence, cyberspace’s dissolution and ongoing eversion might mean, now, for culture and the humanities. If cyberspace was a “consensual hallucination,” then that consensus was widespread (and remains in effect for some people), and the eversion therefore represents a significant but still unfolding shift in the collective imagination. Such a shift calls for interpretation.

I think the changes observed by authors such as Jurgenson, Coleman (and Shirky), Greenfield, Hayles, and others, all writing from different disciplines and different perspectives, reflect a broader cultural change whose effects we are still experiencing, a multi-platform shift in the nature of the collective experience of networked technologies. My focus is on that shift, as an ongoing process, and on its significance as a context for understanding the emergence of the digital humanities. It’s not that (to borrow a phrase from Virginia Woolf) on or about December 2006, say, the character of the network changed. Nothing that sudden and clear-cut took place, of course. But I do think that between about 2004 and 2008, the cumulative effect of a variety of changes in technology and culture converged and culminated in a new consensual imagination of the role of the network in relation to the physical and social world. In other words, the network was everting.

At about that same moment, the digital humanities rather suddenly achieved a new level of public attention, as I sketched out in the introduction, emerging out of a decades-long tradition of humanities computing and marked by the term “digital humanities” itself—which seems to have been coined in 2001 but reached a kind of critical mass, in terms of public awareness and institutional influence, ranging from the publication of the influential *Companion to Digital Humanities* (2004), to notices in the press, to the establishment of an Office of Digital Humanities at the National Endowment of the Humanities, between 2004–2007.¹⁹ While the earlier established practices of humanities computing continued, the new-model digital humanities emphasized new methods and new media, the analysis and visualization of large datasets of humanities materials, for

example, including for the purposes of what Franco Moretti named “distant reading” (2005); it continued to engage in building digital tools and Websites and archives, but also began to experiment with using 3D printers and making wearable processors and other devices; and it responded to the geospatial turn across the disciplines.²⁰ The new digital humanities also increasingly turned its attention to new media, including born-digital media, and, to a greater extent than has been fully recognized, began to study game theory and even to build video games and Alternate Reality Games (ARGs). So the concurrent eversion of cyberspace and the rise of the new DH was no mere coincidence. In one sense, the new digital humanities is the product of the same changes marked by the eversion, is arguably humanities computing everted.

In its newly prominent forms, DH is both a response to and a contributing cause of the wider eversion, as can be glimpsed in the substitution performed at a crucial moment (by John Unsworth and Andrew McNeillie, in titling a collection of essays) from *digitized* to *digital* humanities: from implying a separation between the stuff of the humanities—manuscripts, books, documents, maps, works of art of all kinds, other artifacts—and computing, to more of a mixed reality, characterized by two-way interactions between the two realms, physical artifacts and digital media.²¹ Instead of only digitizing the archives of our cultural heritage in order to move them out onto the network (thought that work continued of course), many practitioners began to see themselves putting the digital into reciprocal conversation with an array of cultural artifacts, the objects on which humanistic study has historically been based, as well as new kinds of objects, including born-digital artifacts. In new media, this kind of reciprocal interaction between data and artifacts, algorithm and world, has been effectively modeled for decades in video games. So throughout this book, I’ll cite games as the best examples of some the problems of new media that are especially relevant to the rise of DH.

Notes

1 William Gibson, “Google’s Earth,” *New York Times*, August 31, 2010, <http://www.nytimes.com/2010/09/01/opinion/01gibson.html>.

2 See for example Clay Shirky, *Here Comes Everybody: The Power of Organizing Without Organizations* (New York: Penguin Press, 2008), 195–96, who echoes Gibson on the term cyberspace and its fading from use. The notable exceptions, perhaps significantly enough, are uses of the term by the military and governments, as in cyber-attack and cyber-warfare, and in the analogous case of cyber-bullying. In all of these cases, one might imagine that there’s a resistance to acknowledging the (frightening) breakdown of the distinction, the penetration of what had been conceived of as separate worlds.

3 Jane Holl Lute, written testimony before House Committee on Homeland Security, March 13, 2013, <http://www.dhs.gov/news/2013/03/13/written-testimony-dhs-deputy-secretary-jane-holl-lute-house-committee-homeland>. She has used the endoskeleton metaphor for years, for example, in an op-ed co-authored with Bruce McConnell, “A Civil Perspective on CyberSecurity,” *Wired*, February 14, 2011, <http://www.wired.com/threatlevel/2011/02/dhs-op-ed/>. (Thanks to Erik Hanson for cc’ing me in a retweet of Lute’s latest remarks.)

4 “The Art of Fiction No. 211: William Gibson,” *The Paris Review* 197 (Summer 2011), 106–49 (109).

5 By “the network” I refer to the notional composite that combines (and popularly confuses) the Internet, the Web, cellular data networks, the GPS satellite network, over copper, fiber optics, radio waves—in other words, the network as it’s experienced by most people in their daily lives.

6 William Gibson interviewed by Robert Hilferly, 2009, YouTube (aitchayess), http://m.youtube.com/?reload=9&rdm=mfca6baq#/watch?v=Gxau_FLaSzo&desktop_uri=%2Fwatch%3Fv%3DGxau_FLaSzo.

7 Marcos Novak, “Eversion: Brushing Against Avatars, Aliens, and Angels,” in Bruce Clarke and Linda Dalrymple Henderson, eds., *From Energy to Information: Representation in Science and Technology, Art and Literature* (Stanford: Stanford University Press, 2002), 309–23. A version of the essay first appeared in *Hypersurface Architecture AD 69* (London: Academy Editions, 1999), 9–10.

8 Marcos Novak, in exhibit sponsored by UCSB’s Media Arts and Technology program, 2008, “Turbulent Topologies”: http://www.mat.ucsb.edu/res_proj5.php.

9 Gibson has said this in various interviews, including on the radio in the 1999. For one tracing of the saying, see Brian Dear, Brianstorms blog, October 16, 2004, <http://www.brianstorms.com/archives/000461.html>.

10 On the decline of Second Life see Dan Heath and Chip Heath, *The Myth of the Garage and Other Minor Surprises* (New York: Crown Business, 2011), 2013, <http://www.heathbrothers.com/the-myth-of-the-garage/>.

11 Jason Farman, *Mobile Interface Theory: Embodied Space and Locative Media* (New York and London: Routledge, 2011); and Eric Gordon and Adriana de Souza e Silva, *Net Locality: Why Location Matters in a Networked World* (Chichester, West Sussex, UK: Wiley-Blackwell, 2011).

12 William Gibson, *Spook Country* (New York: Putnam, 2007).

- 13 N. Katherine Hayles, "Cybernetics," in *Critical Terms for Media Studies*, ed. W. J. T. Mitchell and Mark B. N. Hansen (Chicago: University of Chicago Press, 2010), 144–56 (147–48).
- 14 Adam Greenfield, *Everyware: The Dawning Age of Ubiquitous Computing* (Berkeley, CA: New Riders, 2006), 73. One of the virtues of Greenfield's book is that it considers the legal and ethical implications for agency, privacy, and security of newly pervasive systems.
- 15 Clay Shirky, Foreword to B. Coleman, *Hello Avatar: Rise of the Networked Generation* (Cambridge, MA and London, UK: MIT Press, 2011), iv–xiv.
- 16 Nathan Jurgenson "Digital Dualism versus Augmented Reality," Cyborgology blog, February 24, 2011, <http://thesocietypages.org/cyborgology/2011/02/24/digital-dualism-versus-augmented-reality/>.
- 17 Nathan Jurgenson, "The IRL Fetish," *The New Inquiry*, June 28, 2012, <http://thenewinquiry.com/essays/the-irl-fetish/>.
- 18 Nicholas Carr, "Digital Dualism Denialism," Rough Type blog, February 27, 2013, <http://www.rough.type.com/?p=2090>.
- 19 The advantage of the metaphor of coining is that it suggests bringing a term into currency, rather than that more elusive thing—invention and first use. Though some may have used "digital humanities" before 2001, I follow Matthew Kirschenbaum's account of the term's coming into currency in "What is Digital Humanities," in Matthew Gold, *Debates in the Digital Humanities* (Minneapolis, University of Minnesota Press, 2012), 3–7; and "What is Digital Humanities and What's it Doing in English Departments?," *ADE Bulletin* 150 (2010): 1–7, http://mkirschenbaum.files.wordpress.com/2011/01/kirschenbaum_ade150.pdf. See also Patrik Svensson, "Humanities Computing as Digital Humanities," *DHQ* 3.3 (2009), <http://digitalhumanities.org/dhq/vol/3/3/000065/000065.html>.
- 20 Stephen Ramsay and Geoffrey Rockwell, "Developing Things: Notes toward an Epistemology of Building in the Digital Humanities," in Gold, ed., *Debates*, 75–84; Bethany Nowviskie, "Eternal September of the Digital Humanities," in Gold, ed., *Debates*, 243–48.
- 21 This was for the collection, ed. Susan Schreibman, Ray Siemens, and John Unsworth, *A Companion to Digital Humanities* (Oxford: Blackwell, 2004), <http://www.digitalhumanities.org/companion/>. On this shift from "digitized" to "digital" see Kirschenbaum, "What is?," in Gold, ed., *Debates*, 5.