Chapter 36

Landscape, Locative Media, and the Duplicity of Code

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Amid the buzz and clatter of the diner, Nancy checks her phone; Sid should be here soon. Two hours ago he checked in at the grocery store on the way home from the office, and his Tweet from 34 seconds ago indicates that he is "heading into town with @nancyt." She opens the Places app on her phone to monitor his progress, and is horrified to note that two of her least favorite high school friends are right here in the Country Kitchen of all places. Time for a quick exit. She looks around; Bebe with her distinctive blond hair is sitting at the bar, but a brunette, not the redheaded Sheila, sits beside her. Safely in the street outside, she takes out her phone again, and unblocks Sheila's Facebook profile. That explains it: 361 profile pictures of her grinning face, the most recent mobile upload showcasing her "new look <3." Nancy needs a new plan, so checks her coupons app: a Mexican restaurant 0.2 miles away has a happy hour special, she notes; two seconds later she is perusing its four star user rating and a glowing review by "Herbert_Garrison," a recommended reviewer with 36 Urbanspoon contributions to his name. Looks good. She taps for walking directions, updates her status, and texts Sid the change of venue as she checks in.

Introduction

Spurred by the rapid coming of age of the geoweb, in the form of consumer digital mapping and locational services, geographers are taking a reinvigorated interest in critical questions around cartographic representation and practice (Crampton 2009a, 2009b; Goodchild 2007). User-generated or crowdsourced mappings entail the enrollment of new publics in cartographic practices as diverse as natural disaster mapping and recreational geocaching, and as banal as checking in to locations and sharing locationally referenced photographs. In tandem, the role of digital technologies more generally in remediating the production of space (Crang,

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Crang, and May 1999) has captured the attention of growing numbers of scholars concerned with the agency of software code to shape everyday lives and places (Thrift and French 2002; Fuller 2008; Kitchin and Dodge 2011). This body of research focuses on the "automatic production" (Thrift and French 2002) of space via practices ranging from the policing of access and mobility through congestion pricing and CCTV surveillance, to the "software sorting" classifications (Graham 2005) that differentiate between individuals based on postal code origin and credit score.

These two strands of research overlap most notably in the context of the increasingly ubiquitous phenomenon of locative media technologies; that is, the smartphones, online maps, and proliferating layers of geographically referenced content that are fundamentally imbricated with contemporary experiences in and representations of place. The scenario presented in the opening vignette is commonplace within more privileged parts of the urbanized world, perhaps hackneyed in its familiarity. But just as significant as the spatial and class contours of these technologies – the uneven geographies of digital divides (Zook 2010) and technological inclusion/exclusion – are the behind-the-screens processes that mediate ostensibly straightforward engagements with locative media. In short, critical attention is increasingly directed to the technological, political, and social "innards," in the phraseology of Nigel Thrift (2011: 8), beneath the smooth "surface in continuous motion" on which digitally mediated social life is (s)played out. It is this software-mediated layer of everyday life that shapes our social interactions in important ways, even as it invites, even encourages, us to ignore it.

Metaphors of revealing innards, of unmasking deeper, more basic understandings of the work that code – software, the digital – does in the world, highlight fundamental questions of epistemology: how do we know (in) a world of apparent fluidity and multiplicity, continuous motion and indeterminacy? It is paradoxical that a key enabling technological layer of this superficial fluidity is packed away in the black boxes (sometimes literally) of the computers and cell phones that mediate our access to and experiences of the always-already digitally augmented world. When we talk about landscape we are talking about material places and ways of seeing that are (re)produced through computer screens, cell phones, traffic management, circulations of images and discourse, geospatial surveillance, and myriad other more or less insidious and more or less taken-for-granted manifestations of code's work. When we talk about subjectivity and experience we are talking about identities and perceptions that are coproduced with or reconfigured by digital technologies in various kinds of ways: whether through engagement in the witting theatricality of social media, or the unwitting individuation and software-sorted unevenness of, for example, border security, credit approval, and the digitization of bodies (Graham 2005; Crang and Graham 2007; Amoore and Hall 2009).

This chapter outlines some of the implications of code in the context of cultural geographies in general and cultural landscapes in particular. We first argue that the coding of landscapes should not be viewed simply as a discrete and highly technical series of practices involved in the programming of specific high-tech systems and spaces, but rather as a more diffuse set of subjective processes and practices enrolling individuals in more or less obvious ways in the writing of cultural landscapes. The often obscure(d) ways in which code works through landscape points to the need to (re)politicize its work in ordering and reflecting social lives, rather than accept it as an innocent or uncomplicated actor. Interrogating the duplicity of code re-places software as commensurable with and intrinsic to broader understandings of the ways in which landscape works as an actually existing material thing, and as a way of seeing (Schein 1997) and being seen: new visualities/visibilities.

Building upon these ideas, we next review and reflect on the ways in which geographers are beginning to understand locative technologies as constitutive of remediated regimes of visuality entailing particular subjects and objects of a coded gaze. In particular, we reflect on the ways in which the God's eye view of place afforded by interfaces such as Google Earth provides an intoxicating yet duplicitous landscape experience. The technology embedded within twenty-first-century consumer electronics promises to extend creativity and even authorship, albeit within tightly coded parameters and in concert with the simultaneous proliferation of new forms of self-surveillance.

We then turn to questions of positionality, and how locative technologies work to produce particular kinds of coded subjects. Far from a ubiquitous and uniform experience, digital mapping technologies and the digital landscapes they produce guide and code subjects toward specific experiences. Coded subjects are trained in the new regimes of visuality that multiply and highlight particular representations of places even as software may work to smooth out, or overlook entirely, the breadth and diversity of lay knowledges. Finally, we evoke code's role in the recombination of multiple discourses and temporalities into indeterminate presents and thereby in shaping memory and memorialization. The traces left by geotagged photographs, commentary, and other annotations offer fragmentary echoes of the past that are desequenced and incorporated into temporally flattened digital landscapes. Echoing Mike Crang and Penny Travlou (2001) on ancient Athens, the digital past becomes present-again, "available as a resource to be taken up and through which present actions can occur" (p. 173).

The goal of this chapter is to recognize that locative digital technologies are (increasingly) significant actants in everyday life, constitutive of and constituted by everyday places, and tied up with ways of knowing/being-in-the-world. This approach speaks to the need for the further mainstreaming of locative media within a broader cultural geographic framework. Doing so is crucial to understanding the complex ways in which these locative digital technologies remediate the production of space, landscape, and subjectivity.

Coded Landscapes and the Duplicity of Code

We can think of software code most basically as a series of rules or processes that do work upon particular data inputs and (thus) on the world. Geographers have theorized the role of code in a variety of ways, often focusing on its capacity to produce or "transduce" particular types of spaces – often high-tech spaces of mobility such as the airport but also spaces of the household and the farm – through reiterative processes (Kitchin and Dodge 2011). This apparent autonomy of code is signaled by Thrift and French's (2002) concept of the automatic production of space, emphasizing the extent to which so much of "the background" of everyday life is transduced by the "absent presence" (p. 311) of software. Although such work stresses the agentive quality of code's transduction or remediation of space, geographers also note its contingency, indeterminacy, and irreducibly social character. There is a recognition, then, that code does not simply work in deterministic ways but changes according to contexts, toward the production of what Martin Dodge and Rob Kitchin (2005) differentiate as exceptional "code/spaces" in which "code *dominates* the production of space" (p. 198, original emphasis) versus "coded spaces" in which code is part of, but incidental to, the production of space. As a heuristic continuum, rather than a deterministic binary, the distinction signals that there may be qualitative differences between spaces in which code exercises different levels of autonomy, or, alternatively, where code is more or less central to the calling-into-being of spaces.

This code/space versus coded space distinction highlights the variable nature of code's mechanisms of action and how its presence is not always obvious, visible, or traceable to an origin, author, or explicit ideological moment: its absent presence (Thrift and French 2002). To the extent that code delimits or scripts behaviors – from requiring the following of accepted procedures at electronic checkouts to pre-screening risky airline passengers – it frequently does so at a distance, disciplining bodies to mundane, unquestioned, depoliticized practices. More ominously, Thrift (2011) argues that the construction of an apparently smooth surface of motion relies on:

> a whole host of techniques which are designed to *sink into the background and to be background*: conceal innards, eliminate dead links . . . eliminate all traces of where the medium derived from [*sic*] (p.8, emphasis added)

This idea that code conceals the conditions of its creation and power – even as it engenders new social relations and potential practices – points to the *duplicity* of code: that is the inherent articulation between code's visibility and masking, transparency and deception (cf. Daniels 1989), potential and foreclosure. The concept of duplicity highlights the complex ways in which code works to produce space and, by doing so, defines the boundaries of knowledge production, codifies the meanings of place, and delimits a field of potential practice even as it activates remediated temporal and spatial horizons for experience. Echoing Thrift's (2011) observation, it is, then, the obviousness (Mackenzie 2002: 6) or apparent naturalness of code's spaces in which its duplicity inheres.

The question thus becomes one of how the power of code and its duplicity work to reconfigure landscape as a way of seeing, and with what effects. Working from an evocative God's eye fantasy, then Vice President Al Gore imagined an interactive museum exhibit where a world of knowledge would, literally, be in the palm of the user's hand: that is, the globe would be manipulated using a special glove:

> Imagine, for example, a young child going to a Digital Earth exhibit . . . she sees Earth as it appears from space. [She] zooms in, using higher and higher levels of resolution, to see continents, then regions, countries, cities, and finally individual houses, trees, and other natural and man-made objects. Having found an area of the planet she is interested in exploring, she takes the equivalent of a "magic carpet ride" through a 3-D visualization of the terrain. (Gore 1998)

While the specific mechanics of manipulation were a little off, Gore's prediction/fantasy is a rather accurate description of the present character of Google Earth: zoomable, rotatable, three-dimensional imaging, overlaid with (potentially) limitless layers of information. And such capabilities are not the preserve of research institutions, museums, or even any longer of home computer users, but are readily accessible even on mainstream mobile devices. Increasingly, augmented reality applications layer spatial data, in real time, not on archived or stock imagery but on live imagery via a device's cameras, producing digitally enhanced landscapes via the ever present, yet ever veiled, work of code.

New Visualities, New Visibilities: Objects of a Coded Gaze

While the technologies by which coded landscapes come into being may be new, powerful visual representations of landscape have long existed. For Cosgrove (1984) the "landscape

idea" emerged out of the capitalist transition in sixteenth-century Italy. In this genealogy particular landscape visions/representations are products of (and in turn productive/affirmative of) particular sets of social relations: they are socially constructed, assertive claims to meaning in which the viewer is positioned in a particular relation to the scene s/he surveys. As Lesley McCormack (1991) has shown, such claims, in early modern England – as in nineteenth-century America in the guise of county atlases (Conzen 1984) – often centered around claims to ownership, legitimacy, authenticity, and the assertion of local embeddedness on the part of wealthy landowners of/for whom landscape maps were made.

There is a common epistemological thread linking the emergence of mass-consumption analog maps and landscape imagery – for example, in the form of the ubiquitous bird's eye views of industrializing America – and the emergence of contemporary locative media representations. Both are implicated in broader ideological and social impulses. Both are made more powerful by the participation of a large public. Both place the viewer in a particular position of comprehension of, participation in, and power over the scene/screen (see Schein 1993).

How can we think about this God's eye view of landscape – Donna Haraway's oft-cited "God trick" (1988) – afforded by interactive, slippery, zoomable, inhabitable digital maps such as Google Earth? What kind of regime of visuality does such a view entail? Following Gillian Rose (2006) and others, we take visuality to refer to a regime of seeing: how seeing is structured, how "we are able, allowed, or made to see, and how we see this seeing and the unseeing" (Foster 1988: ix).

Kingsbury and Jones (2009) offer the analogy of a "digital peep box" as one means of interpreting the regime of visuality associated with Google Earth, and argue that:

> the peep-box faces stand in for Google Earth's digital pictures and bit-maps, the cellophane represents Google Earth's "atmospheric lights" and "clear blue skies," while the peephole mimics the interface between users and the 3D scene. (p. 505)

But peeping is a voyeuristic, passive, often furtive act subject to the individual predilections of the viewer. Thus, while a peepshow is viewed through a private viewing slot and is situated at the margins of polite society, Google Earth/Maps is very much rated PG – naked sunbathers and other objects of the "erotics of ogling" (p. 505) excepted. Google Earth is viewed/displayed openly and without shame on a crisp, backlit screen. Moreover, the idea of voyeurism does not capture adequately the texture of the interactive, immersive experiences afforded by such digital earths, nor make mention of the hard-coded rules of the game that script the very spontaneity and excitement of ogling as a consumer experience.

Perhaps the digital peep-boxes of virtual earths are epiphenomenal to the structuring forces of the cultural landscape at work underneath the digitally transduced surface. The landscape appears as a shiny, phantasmagorical aura of twinkly screens (Kingsbury and Jones 2009), an almost-thereness distracting from the actually-there machinations of (something like) "authoritarian capitalism" ruthlessly ruling the roost through forms of "distraction" and "control" that automatically produce a carefully commoditized Dionysian "creativity" (Thrift 2011: 12). While such a view emphasizes the transductive power of code, it is overly restrictive toward agency as it precludes the possibility of critical consumption of software-derived products. Alongside peeping exists the real possibility that specific iterations of locative media can work as drivers of various forms of unanticipated improvisation and change, as asserted so suggestively in numerous locative art experiments. For example, the Loca: Set

To Discoverable project – pushing highly personalized messages to cell-phone users based on peer-to-peer surveillance of their movements – explicitly seeks to open a dialogue about the broader implications of a ubiquitous post-Orwellian surveillance logic (www.loca-lab.org). Thus, arguably unlike the pre-scripted passivity of the peep-box, the contents of digital earths, the 3D scenes of Google Earth, are amenable to user input, to changing visual perspective, to zooming, pausing, and to the subjective interpretation of outcomes. Most importantly, the user can amend the narrative – albeit subject to the coded limitations imposed by software – via the editing of existing information and the addition of new data layers. Far from passive, the visualization of these digital landscapes represents a dynamic recombination of individuals' interpretations with others' contributed understandings: a point that boosters of locative media emphasize frequently (Turner 2006).

Perhaps what marks the excitement of Google Earth, and by extension of locative media in general, is not the object of the gaze but the pleasure of "*the gaze itself*" (Žižek 1991: 91, original emphasis). Along just these lines, Kirsty Best (2010: para. 6) argues that "we need to see users as desiring subjects positioned at a cultural moment where the digital information screen has been enlisted as a central driver of both utility and pleasure." Best's argument is that the screen, working to satisfy a desire for monitoring, is a key site/sight in the gaze of the contemporary subject of locative media. But in her analysis, the screen is also duplicitous, working to construct consent to our own surveillance, to interpellate us into our own discipline as we "take up the part offered to us by the technology" (para. 28). In this view, the innocent transparency suggested by the screen belies the fact that its function is founded on the opacity of its coded innards.

This argument provides a useful foil to optimistic claims about the creative and liberating potential of locative media. Whether Kingsbury and Jones' (2009) vision of "intoxicated" adventuring – searching for the quirky, reveling in the excitement of *not* quite being able to see the blurry naked people of Google Earth (p. 507) – is representative of typical, utilitarian engagements with locative media is debatable. Kingsbury and Jones' (2009) article argues, and Gwilym Eades' response (2010) emphasizes, the importance of eschewing an oversimplified binary reading (from Nietzsche) of a rational, Apollonian cartographic discourse as a counterpoint to intoxicated/Dionysian adventuring in Google Earth. These readings suggest that digital mappings ought – as we would argue – be apprehended not as either/or, as inherently limiting and rational (qua Apollonian), or as inherently liberating and playful (qua Dionysian), but consistent with Nietzschean holism as ambivalent cultural products that work in subjective ways, for different people in different contexts but always within the constraints of code.

Like Walter Benjamin's wandering *flâneur* of the Parisian Arcades, emerging technologies create the conditions of possibility for a corresponding "anonymous wandering detective," the e-*flâneur*, as it were, of locative media (Kingsbury and Jones 2009: 504). But locative technologies entail not only the potential for new, panoptic ways of seeing on the part of the consumer/subject – who may display, manipulate, and author locationally referenced data which, a generation ago, were either unavailable or not readily available to the public – but also new ways to *be* coded and made visible. Increasingly, the public is seen and seeing through the digital artifacts of a geocoded life.

Coding Bodies: Subjects of/to Locative Media

We should be careful not to make unsustainable, exaggerated, or ethnocentric claims about the ways in which locative media always, everywhere, and for everyone work in particular,

limiting, or liberating ways (Laegran 2002; Valentine, Holloway, and Bingham 2002; Madge and O'Connor 2005). As Eades (2010) rather gravely warns us, "our children, our teachers, and our future selves," and not only "playful dilettantes, and the like" (p. 672), use and are subject to these technologies – a criticism of a perceived tendency in the literature toward "wanton" (p. 672) accounts of technologically savvy white males' playful experimentation in/with digital technologies. Thus, we invoke Doreen Massey's (1991) argument about the politics of writing time–space compression to argue that the story of a high-tech world of ubiquitous connectivity and interactive digital mapping is, to some extent, the story of middle-class academics and is not, by any means, a universal experience of space for myriad others positioned differentially in respect of processes of globalization, digitalization, and the cod(e)ification of society. The stories of intoxicated *flâneurs* and their dalliances with code-mediated landscapes are not the only stories to be told.

There is a scarcity within the locative media literature to date of explicit engagement with questions of gender (Elwood 2008). Although emerging work on locative media within cultural geography tends generally to be consistent with broadly poststructuralist epistemologies, it seems that much remains to be understood about the ways in which, for example, locatively mediated visualities entail particular gendered gazes and thus particular gendered subjects/objects of knowledge (Nash 1996; Kwan 2002). To what extent and in what ways do specific technologies and changes in the embodied interfaces between humans and computers work toward or against a "utopian dream of the hope for a monstrous world without gender" (Haraway 1991: 116)? Addressing such questions will require taking seriously the potentiality for differentiation and experimentation inherent in emerging technologies. Doing so might also entail more empirically grounded, finer-grained, and "modest" work on/toward alternatives to complement more universalized utopian/dystopian synopses in the manner of Thrift's Lifeworld (2011).

Geographers have begun to examine the articulations of race with locative technologies. Developing the concept of cyberscapes – the cloud of user-generated spatial data about a location – Crutcher and Zook (2009) show how online representations of post-hurricane Katrina New Orleans reflected extant geographies of residential segregation. That user annotations were heavily concentrated in predominantly white areas of the city is significant in a variety of ways. Most basically, it points to the ever present question of digital divides: the race, gender, and class basis of access to and usage of emerging technologies. Perhaps more significantly, it points to the question of racialization of cyberscapes. Echoing recent work on racialized landscape (e.g., Schein 2009), we know that landscape is not innocent, however naturalized the exclusionary discourses materialized in the cultural landscape might appear (McDowell 1983; Bondi and Domosh 1998). In that sense it is a crucial project for critical cultural geographers to query just whose landscape visions are embedded into taken-for-granted base maps via ostensibly democratic practices of crowdsourcing (Leszczynski 2012) and with what effects.

These questions of positionality and ethnocentrism suggest a need more fully to engage with subjectivity and locative media as a crucial methodological issue for geographers studying these phenomena. By now, there are clear cases in the literature that show very directly how particular digital mapping technologies work through code to produce particular kinds of subjects (and objects) of knowledge (e.g., Wilson forthcoming a). Maps that are navigated, manipulated, authored – *inhabited* – by lay audiences are, intuitively, qualitatively different creatures than static paper maps of old, although we should be careful about positing an epochal paper/digital divide and (thus) throwing out two decades or more of work on critical cartography which itself draws attention to the incomplete, processual, performative,

becoming qualities of maps in general (Harley 1989; Crampton 2009a). Ubiquitous electronic maps thus have the potential to produce both a "knowing, empowered imperial audience and its subjects" (Thrift 2011) through the seeing/seen articulation of the new geospatial economy of visuality/visibility (Crampton 2009b). But the precise techniques and practices by which this subjectification proceeds, and the extent to which it can be contested or appropriated differentially by variously situated actors, can only be explicated with further work on specific empirical cases. And in the case of locative media, these cases must include code as one of the elements at play.

For example, in the context of a neighborhood-based exercise in Seattle involving the geotagging of assets/deficiencies, Wilson (forthcoming a) argues that the particular practices of "training the eye," along with the embodied interaction of bodies and machines, produce particular kinds of geocoding subjects who, despite in some cases recognizing the silences, simplifications, and politics inherent in categorization/codification of their lay knowledges, nevertheless participate in such disciplined/disciplining practices. The knowledge recorded by neighborhood survey participants becomes objectified (Wilson forthcoming a) – stripped of the subjective practices of its capture – in order to render it combinable (Latour 1990) with other participants' data for transmission in a format legible to state agencies and funding bodies. Wilson's work suggests that in the specific case of the neighborhood evaluation survey on which he reports, the act of codifying/cod(e)ifying knowledges works to discipline bodies toward particular practices of knowledge production: that is, to see the world in terms of categories. Specifically, for Wilson, this suggests the potential for the collapse of the social, of heterogeneity, of tacit knowledge, embodied experiences, and uncertainty into categorical certainty, into legible and actionable data. In a double move, then, the practice of cod(e)ification – rendering knowledge as (quantitative) data – objectifies knowledge, stripping the subjective content both from its production (the neighborhood residents' engagement with the handheld computer devices) and from its referents (for example, eliding the social processes underpinning homelessness and graffiti in favor of documenting their identifiable visual markers in the material landscape).

Beyond this rather specific case of neighborhood asset mapping, similar impulses can be observed in the arena of social networking. Consumer digital technologies including social networking platforms are key sites in which individuals negotiate, claim, and assert identity in a variety of ways. The management of "profiles" (albeit a degree of management delineated by the coded parameters of the social networking platform) entails a regime of visibility intrinsic to the social and professional lives of many young people and even adults in which subjects think, construct themselves, and are conditioned to present themselves as entities (the profile/username) with attributes (age, sex, pictures, hometown, music videos, favorite quotations, and so forth). The entity–attribute model of profile building suggests a broader categorization imperative on which indexability, comparison, and aggregation rely, and acts as a powerful limiting/structuring architecture for constructing identities and the conduct of social lives. The "structured generativity" of social networking platforms is coded specifically to guide customization and feedback, thus creating an economy of appropriate perpetual and permanent display. Indeed, much of the burgeoning volume of highly personal digital traces of individuals comes not from official databases but from the contributions of users themselves via social networking, blogging, and other electronic projections: a process named by Mann (2004) and others as "sousveillance."

The merciless memory of the online world immortalizes images, histories, data on which reputations, relationships, and careers are made and broken, raising significant ethical

challenges. The vast databases and archives of information derived from online surveillance and sousveillance have no necessary expiration date. There is no clear binary division, then, between, say, the liberatory self-expression of sousveillance and the pernicious infringement of state or corporate surveillance. Hypothetically, we are headed toward "a society that never forgets" (Dodge and Kitchin 2007: 442), where a fine-grained data trail appends to individuals through time, space, and landscape, stored for all eternity and accessible to those who would put such a record to work in achieving more or less "good" outcomes. Such a prospect raises potential privacy concerns even above and beyond those related to real-time monitoring of bodies in space through CCTV, GPS, and the like, prompting technological as well as philosophical responses to the problematic of forgetting (Curry 1997; Bridwell 2007). In response, Dodge and Kitchin (2007) propose a framework for forgetting based on a normative ethics around the desirability of forgetting: "forgetting is not a weakness or a fallibility, but is an emancipatory process," they suggest (p. 441).

Part of this challenge and building on this work on the cod(e)ification of place is to take seriously the temporal dimensions of coded landscapes and subjects. Specifically, in the next section we turn to questions of memory, and code's role in the inscription of locatively mediated landscape as a more or less unwitting autobiography of social life. The digital traces of past interactions – placemarks, Tweets, photographs, and numerous other digital artifacts – represent a record, albeit highly exclusionary, of actions, behaviors, and representations potentially infinite and merciless in scope. In tandem with questions about the algorithmic smoothing (thus elision) of disparate narratives and dissenting voices in a new politics of remembering, we also reflect on the ethics of a politics of forgetting (Dodge and Kitchin 2007).

Coding Memory and Memorialization

Consider these two cases: the first is the experience of a Google Street View user exploring a temporally flattened downtown block of Lexington, Kentucky. When you begin your walk you are confronted with an empty construction lot with bare earth and surrounded by a chain link fence. As you turn the corner, something strange happens: the rubble disappears, the sun comes out, pedestrians walk the previously torn-up sidewalk. As you look back down the blocked-off street, buildings have reappeared. The parking meters beside the jewelry store are occupied; business and life go on as normal. You turned away for less than a minute to circle to the far side of the block, and in that time the architecture has been reconstructed, businesses reinstated, and the weather transformed.

Second is the case of the Bronze Soldier memorial in Tallinn, Estonia: a controversial World War II memorial erected by Soviet authorities in the late 1940s. The monument represents a point of tension between, broadly, ethnic Russians and Estonians who read its claims about the oppressions or glories of the Soviet era rather differently. In 2007 the statue was relocated, amidst much protest and some violence, from its central city location to a military cemetery. But search for the "Bronze Soldier of Tallinn" in Google Maps and the apparent relocation is less straightforward. Indeed, the first and only search result identifies the former location; multiple photographs and annotations (uploaded to various online photo-sharing communities) highlight the original site (Graham, Zook, and Boulton 2011).

Rarely are the ambivalent temporalities of web information as stark as in the cases described here, and one might contend that such inconsistencies are inevitable and innocuous. But subjective experiences of place in the code-mediated world entail the recombination of

(a)

(b)

Figure 36.1 Google Street View images of Downtown Lexington.

multiple discourses and multiple temporalities into indeterminate presents. Thus, not only does the locative mediation of landscape entail the melding of distinct spaces (of cyberspace, of memory, of the location itself), but also of distinct temporalities: the latent, temporally ambiguous digital cloud "out there" waiting to be accessed, used, and combined in place, even as the digital already shapes the materiality of place in important ways (Graham 2010).

The reviews, placemarks, and photographs that annotate everyday landscapes through Google Maps and similar applications are often of uncertain origin: perhaps scraped from web directories, fed from third-party sites, or actively contributed by users. Geolocated images of a downtown block of Lexington or the Bronze Soldier represent interventions in, or more or less witting authorship of, the meaning of this contested landscape. Posted for nostalgia, or simply as a ready means of storage, they remain accessible as a weight and resource for future searches. Divorced temporally from their time of creation and posting, and freed from the thick encumbrances of motive or indifference of their creators, these images stand as markers of place, memorials of motives now unknown. They represent histories of place but are simultaneously interventions in the ongoing layering of meanings that continuously reconstruct place anew.

Figure 36.2 Google Maps search results for "Bronze Soldier of Tallinn."
Source: © 2011 Google Map data © 2011 Tele Atlas.

Michel de Certeau offers a potential vocabulary for thinking through the temporality of the locatively mediated landscape. In his terms, the trace can be thought of as synecdoche, where the fragment is made to "play the role of the whole" (1984: 101); the Yelp.com online review stands in for the totality of "worst food ever" and the social conditions and memories elided and evoked by such a codification. This raises the fundamental question of who is participating in this codification and which voices are missing. As noted earlier, there are clear gendered and racialized dimensions to the digital mediated landscapes under construction (Kwan 2002; Elwood 2008).

Amongst the layered cartographies of planners, maps, and the "strange toponymy [of place names] that is detached from actual places" (p. 104) floats another immanent field – of memory and affect. Increasingly, that which has been experienced is captured, however incompletely, as a digital marker – a Tweet, a review, a piece of georeferenced detritus which the innards of code collects and uses to populate the coded landscapes of locative media. In this way, memorialization via annotation becomes "anti-museum" in de Certeau's words; cyberspace has no specific time and no particular place, or existence (an echo, a ghost, a shadow) beyond its embodied articulation with the materiality of experience. Manuel Castells' conception of timeless time is also apt here: "time is compressed . . . de-sequenced,

including past, present, and future occurring in a random sequence" (2000: 12–13). If we embody – and in our engagements with the materiality and digitality of landscape it embodies – traces of past encounters, past experiences, past fears, and past decisions, then the present, not to mention the future, becomes far less stable, less given and less natural (Edensor 2005) – but nonetheless geocoded, annotated, claimed in ways that again reflect the positionality of the voices that have and have not been heard.

By considering those intangible and material/codified traces of spatial practice, we can imagine an experience of place outside of the contrived spectacles of the Google Earth and the hyperreal (post)modern city – a code-supported, individual/subjective, emotional experience of digitally augmented ghosts, echoes, and relics that goes far beyond deliberately structured regimes of visuality. The echoes of past presences (as filtered through the coded and subjective authoring of locative media) are flattened into a temporally destitute present: the ever-present now. As such there is fertile ground for exploration, theoretical and empirical, of the implications for these digitally inscribed social hauntings of place (cf. Pile 2005). Such is the goal of the Walking Through Time smartphone application developed by the Edinburgh College of Art. Here, users explore present-day urban spaces using a historical map overlay. The authors explain:

> people will choose to navigate their city not in the technologically determined "present" in which the map is as up-to-date and "fresh" as possible, but may prefer to use an old landscape which is occupied by ghosts. Walking through streets that aren't "cleansed" of memories, or monitored by spooks that want to guide our interpretation of the past in order to sustain our fear of particular ghosts, may help us "see" the trauma that remains in a place and tread with understanding around its scars. (Fields 2010)

In such a project – explicitly evoking the past – as in digitally mediated experiences of place more generally, this formulation of presence = present(s) speaks to the uncertain afterlife of locative annotations, mappings that are never dead, but do work – perhaps even jarring, uncomfortable, irruptive work – in producing futures.

Conclusion

If we are to develop theoretically and politically informed (and informing) accounts of the ways in which locative media technologies work in practice, the study of these technologies cannot be left "only to those who would unproblematically reproduce excitable futurist advocacy or reduce 'improving' [them] to a technical/technological challenge" (Boulton 2010) toward more perfect visibility and knowledge of populations. But neither ought crucial questions about the spaces and subjects of locative media and the work of information technologies more generally be left solely in the domain of Internet-, cyber-, and other hyphenated niche geographies/geographers of technology.

Although the exciting, cutting-edge locative media technologies that are mainstream or emerging today will, doubtless, appear archaic, comical even, a decade from now, "technological futurity" is, as Sam Kinsley (2010) argues, "a complex array of performative and proactive dispositions towards the future" (p. 6), located within problematic and differentially situated politics of anticipation. It is the goal of this chapter to provoke discussion about the ways in which existing theoretical and methodological frameworks within cultural geography and social theory are providing useful lenses for understanding the emerging

practices associated with the geoweb. Moreover, we also emphasize the need for renewed, empirical examination of the texture and ambivalence of specific locative media products focusing on particular technologies, particular places, and particular individuals. Thus we ought to keep a critical distance in our writing (about) digitality and digital futures both from eulogies to liberatory e-*flâneurie* (with all the assumptions of privilege these entail) and from monolithically dystopian imaginaries of a Big Brother Lifeworld, Inc. of technologically determined servitude.

Work on locative media is moving toward developing critical accounts of the ways in which these technologies mediate embodied engagements with landscape and cultural geographies. In parallel, geographers are also beginning to engage more fully with questions of subjectivity, the changing nature of expertise, and the uneven and differentiated access to and usage of these technologies. Such questions establish the workings of the locatively mediated landscape as an important and central topic for cultural landscape scholarship and for critical geographical attention more generally.

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