

Technology, memory, and collective knowing

cultural geographies

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Abstract

New social and spatial media and other modes of pervasive computing are altering ways of knowing, remembering, and engaging across time and space. This collection explores how the digital, interactive, and collaborative nature of these technologies contributes to transformations in the nature of knowledge and memory. In particular, the contributions focus on theorizing the *collective* or *social* subjectivities and impacts of these technologically mediated rememberings. What are the processes and relationships through which shared knowledge and memory can be transmitted and transformed across time and space? How does memory become socially and politically meaningful? The contributing authors consider how new social and spatial technologies transform space/time connections, reconfigure the forms and practices through which collective memory is transmitted or attention is paid, and impact social relations.

Keywords

attention, geoweb, memory, new spatial media, social media, time

Social and spatial media, especially interactive online and mobile applications, play an increasing role in everyday lives in many parts of the world, demonstrably altering space, time, memory, and collective knowledge. Interactive mapping platforms like Google Maps are used by individuals and groups to create and share multimedia narratives about places, their social and spatial histories, and their possible futures.¹ Applications such as Facebook store and organize our activities into ‘timelines’ and circulate these digital histories of our lives to others in our online social networks. Digital histories are constituted through the traces left in databases and websites as we use geosocial applications such as FourSquare to ‘check in’ to particular places, post photographs with

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embedded latitude/longitude coordinates to image sharing services like Flickr or Instagram, or simply swipe a payment card to board a bus whose location is tracked via global positioning system (GPS). The high speed and volume of communication enabled through social media platforms like Reddit, Twitter, and Facebook transform the scope and scale with which spatial meanings and accounts of past events may be circulated and revised – as evidenced in the contradictory and rapidly changing ‘truths’ about suspects after the Boston Marathon bombing and events related to a widely covered date rape case in Steubenville, Ohio.²

These technologies are not a radical break with past practices. Prior innovations in mass media and information and communication technologies – from radio to email to geographical information system (GIS) – have altered the production, representation, and circulation of knowledge. Geographers, historians, and other scholars have had a longstanding interest in how technologies, broadly conceived, alter spatial and temporal relationships.³ Yet, there is growing interest in how the interactive and locational capabilities of social and spatial media, and their pervasiveness in (some) everyday lives, is transforming cultural practices of knowing, remembering, and engaging across time and space. Kelley, for instance, argues that our use of interactive locational applications such as Localicious or MyCityWay produces collective urban imaginaries, as countless individuals exchange accounts of their movements, interactions, experiences, and observations in a city.⁴ Others suggest that these technology-mediated collective imaginaries shape our spatial practices as well as our embodied affective experiences of landscapes. Thatcher, for example, has argued that Internet/smartphone pedestrian routing applications produce meanings (safety/danger) and emotions (hope/fear), and harness them to spaces – with implications for users’ choices about spaces to occupy or avoid.⁵

Other scholars characterize these intertwined virtual and material spatialities as an ‘augmented reality’, arguing that they alter perceptions and experiences of time by de-linking events and conditions represented in virtual spaces from their real-time contexts.⁶ For example, viewing images of our respective Seattle neighborhoods in Google Earth’s high-resolution satellite imagery or Google Street View’s geo-located photo panoramas, we find it is always summer, regardless of the actual time of year we retrieve these images. Digital practices blur distinct separations between past, present, and future, as exemplified in the pedestrian routing applications in Thatcher’s study. Suggested routes to use or avoid are generated from analysis of archived data about past events. The use of these routes in the present scripts potential futures, as the meanings ascribed to particular places are carried forward by app users’ ongoing spatial practices of inhabiting, avoiding, fearing, or desiring these places.⁷ Other temporal enfoldings are also produced in discourses that frame technologies as an inevitable and anticipated future, explicitly and implicitly insisting that these technologies be engaged in the present moment if people and places are to move forward to this future.⁸

Our engagements with social and spatial media transform not just spatial meanings, spatial practices, and time/temporalities but also how we constitute memory, produce and share histories, or even pay attention. Recent scholarship suggests that digital media are spaces for the production of uniquely durable and affective memory archives. One example is Laura Kurgan’s 9/11 memorial, which uses high-resolution satellite imagery and immersive audio and visual techniques to situate visitors in digitally mediated sensory experiences of a past site/event.⁹ Other examples include the wide array of interactive mapping and collaborative learning projects devoted to urban, cultural, or environmental histories¹⁰ and geohumanities projects exploring how digital spatial media and GIS can be used to generate public histories from the memories of countless individuals.¹¹ Recent research on ‘geo activism’ illustrates how activist groups use these technologies to try to capture the attention of potential allies or frame and direct their attention in particular ways.¹² Other related research marks shifts in our own attention capabilities as scholars, because so much of our reading, writing, and thinking is now mediated through digital technologies.¹³

Digital technologies are implicated not just in how we remember but also in how we forget. The accumulation and retention of personal information online creates a sort of durable 'life log' that alters what and how it is possible to 'forget'. The details of prior activities, characteristics, relationships, or even needs and desires remain accessible with a degree of detail and durability far beyond human memory.¹⁴ Notably, perhaps in response to concerns about such digital remembering, recently released social media applications like SnapChat and Cyberdust are tailored to 'forget', destroying a digital text or photograph after it is sent and viewed by the recipient and blocking capture of the artifact via screen shot or download.¹⁵

While there is substantial and growing focus on how new social and spatial technologies shape knowledge, knowing, time, temporalities, memory, and attention, much of the emphasis to date has been focused at the level of the individual – individual subjectivity formation, identity, privacy, or transformations of individual experiences of space and time. Our complementary concern in this edited collection lies in theorizing the *collective* or *social* subjectivities and politics of technology-mediated memory and attention. That is, what happens to collectively produced and held memory, or the collective relational connections of people and places forged as we pay or seek attention via digital social and spatial media? How do new digital media shape what and how we remember, or how we know and narrate social and spatial histories – our own or those of others? What implications might this have for *acting* with others?

Geographers' work in recent years underscores the cultural and political significance of collective remembering and paying attention. For instance, Johnson's work on public remembrance of a 1998 bombing in Northern Ireland notes how the present moment and practice of remembering shape not just interpretations of the past but collectively held imaginaries of possible futures.¹⁶ These shared imaginaries may then mobilize particular kinds of present actions that work toward the collectively envisioned future, with this articulation of past, present, and future predicated on collectively held memory or common framings of a shared history. Other scholars point to linkages between memory and politics, illustrating how collective practices of memory in the present moment render particular kinds of politics visible or invisible, possible or impossible. Obrador and Carter, for example, show how guided urban history tours of Barcelona's anarchist movement remake collectively held memory of the city, drawing hidden social and political histories into present spaces.¹⁷ Other related work underscores that contentious politics are a kind of attentional work, as actors try to command collective attention upon their message, goals, and actions.¹⁸ Our own research on interactive online mapping shows that collaborative processes of creating and interacting with digital maps of community histories can generate deep forms of attention, inter-generational shared memory, and collective political subject formation.¹⁹

The papers in this collection build upon this body of work and its core questions. Sam Kinsley expands theorizations of *how* technology-mediated forms of memory shape collective urban life. He examines the pervasive recording of our activities, needs/desires, relationships, and bodies through retailers' loyalty cards and other data capture schemes, the digital architectures of social media platforms, and the multitude of digital sensors and recording practices that comprise the so-called smart city. He frames these digital mediations of everyday life as industrialized systems of memory that rest upon digital structures and processes of ordering, discretization, and routinization, at speeds and scopes far beyond human capacity to track or intervene. These industrialized memory programs blur discrete separations of past and present, or individual and collective. A marketing scheme that distributes suggested future purchases cannot function without storage and analysis of past activities. Suggestions offered to individuals are algorithmically generated from the individual's digital trace of activities and the aggregated activities of many others, in effect steering individuals into digitally constructed 'collective' norms. Kinsley's discussion also hints at the intensive cultural work that accompanies these practices, to try to frame systematized programs

of digital capture, storage, and analysis within already-accepted terms of human interactions. In this lexicon, smart cities and loyalty programs allow governments and companies to 'listen' to consumers, while social media platform architectures that digitally track actions and interactions script these recording practices in familiar terms such as 'like', 'read', or 'watch'. In this way, what is new and potentially strange is rendered familiar by pulling it into framings of social interaction commonly understood as ordinary parts of everyday life.

Matthew Wilson interrogates university–community GIS partnerships and the social and spatial media strategies of under-resourced nonprofit organizations, to shed light on the ambiguities and inequalities of contemporary digital culture. He argues that nonprofit organizations now operate in an 'attention economy' in which their opportunities and impacts rest in large part on the use of digital media (GIS, web mapping, database software, Facebook, Twitter, etc.) to command attention to and engagement with their activities. Wilson argues that there is an increasing imperative for these groups to act as digital culture workers, yet they are systematically disadvantaged in these digital labors. For example, purportedly free digital services often rely on a two-tier system in which digital services are free within fixed limits (time, storage capacity, transactions) and higher capacity uses incur fees.²⁰ Furthermore, Wilson notes that even when digital services are indeed available free of charge, the rapid pace at which they are created, disbanded, or modified requires devoting already scarce resources to simply keeping up. Ironically, successfully navigating the attention economy requires evermore attention being paid to sustaining and maintaining these efforts, with greater relative costs to under-resourced groups.

These papers make a number of productive interventions in our ongoing efforts to comprehend the broader, transformative effects of social and spatial media. First, they show the continued relevance of some of the familiar concepts used by critical geographers to theorize GIS, remote sensing, cyberspace, and pervasive computing. Wilson's and Kinsley's papers use Foucauldian concepts to theorize the role of these new media in constituting collective knowledge, drawing on ideas of biopower and governmentality to conceptualize state power or engagements with the state, and the panopticon to characterize shifts in surveillance and the nature of watching.²¹ Derridean ideas on representation, texts, and discourse echo in their theorizations of how the digital, networked, and interactive capabilities of social and spatial media transform the production and circulation of cultural meanings.²² Their attention to the social sorting effects of these new media through encoded practices of calculation, accounting, ordering, and storing is steeped in Heidegger's work on technology.²³

These papers also show how the theoretical lexicon familiar to geographers studying the social and cultural significance of technologies must be expanded in order to understand technological mediations of space and time, memory, attention, and collective knowing. Concepts like biopower do not fully capture the cognitive and psycho-social dimensions of digitally mediated memory and attention. The idea of panopticon does not fully encompass the complex modes of watching and governing enabled through industrialized memory programs. Kinsley and Wilson turn to Bernard Stiegler's work on memory and attention to bridge these gaps. They situate digital social and spatial media as 'technics' that, following Stiegler, externalize knowledge such that it can be transmitted across time and space.²⁴ Within this framing, writing a letter, drawing, tweeting, or sharing a photo through Instagram are all technics that connect our knowledge and action in the present moment to knowledge and possible action in a future moment, and open the possibility of collective uptake of individual memory. Wilson and Kinsley focus on the unique properties of digital technics and the consequences of this digitality upon knowledge, memory, and attention. They also rely on Stiegler's argument that attention is inextricably bound up in political economic practices and relations. In Wilson's and Kinsley's respective papers, we see the influence of profit imperatives that drive the constant release of new software revisions and expanded regimes of capture,

which themselves have implications for the attentional work of our everyday encounters with digital technologies.²⁵ Incorporating ideas from Stiegler allows Wilson and Kinsley to articulate more specifically what it is about our digital practices with social and spatial media that affects memory, attention, and collective knowledge.

Another significant contribution of this collection lies in the authors' efforts to move the scholarly and public conversation about the effects of new social/spatial media from *what* these effects are to *how* they emerge. In the examples offered by Kinsley and Wilson, we see how memory, its transmission, and its mutability are shaped by the specific material practices and functionalities of the particular technics of its externalization. The digital encoding and storage of social and spatial media, together with their interactive functions, render memories mediated through them 'stickier' and 'slipperier' – more permanent and also harder for any single entity to control. Wilson reminds us that different forms of representation do different kinds of attention work, because they are understood via culturally constructed epistemological hierarchies. Visual representations such as maps or photographs can imbue memories with a particular authenticity or authority when they are transmitted to others. Such digital visual artifacts may carry forward forms of memory that are immersive, immediate/un-abstracted, or affective, and likely to foster different kinds of collective bonds or actions than, say, a numerical and tabular recording of data. Yet, as Kinsley and Wilson both argue, the externalization of memory in social and spatial media can also enforce a structured and calculative ordering of time, space, and experience through the ways that databases and software store, retrieve, and organize information. For example, the digital history constituted by a Facebook Timeline breaks time and histories into discrete events harnessed to individual lives (e.g. 'Married 6/16/1968'). In such a representation, the processual and shared dimensions of building and sustaining a relationship before and after marriage are invisible in the bounded digital trace of the 'event'.

These papers also illustrate persistent ambiguities, contradictory tendencies, and differential effects of technology-mediated memory, attention, and collective knowledge and action. For example, they show how the externalization made possible through social and spatial media creates a tendency toward digital histories and memories that are at once ineluctable and hyper-fluid. Kinsley notes how pervasive digital recording of many aspects of our everyday lives creates digital histories we cannot realistically avoid or often even know about. The ubiquity of these technologies and their ambient presence in many spaces means that we often unwittingly leave digital traces in our everyday activities. Yet, the interactive potentials built into many forms of social and spatial media also mean that our digital histories are also more open for modification and reworking than ever. As Wilson suggests, this openness to constant change is one way these digital practices command our attention. We are captured by the tailoring of our digital selves, creating and editing the histories traced in our social media profiles. Kinsley highlights a closely related ambiguity, noting that the externalization of memory via social networking services enables deeply individualized online histories of the self, yet simultaneously imposes ordering structures that force these self-representations into pre-scripted and immutable forms (e.g. the 'event') and relations (e.g. X 'likes' Y).

Finally, these papers remind us of the contingency and differential effects of technology-mediated memory, attention, and collective engagement. In a world in which access to digital technologies is deeply uneven and the individuals and groups that use them have widely disparate resources for doing so, implications are widely variable. Wilson points to the disadvantaged position of nongovernmental organizations (NGOs) and community-based organizations within contemporary digital attention economies and the greater problems they experience because of the rapid and constant pace of technological change. Participation in these attention economies via online social and spatial media is a growing imperative, yet comes with costs that limit their capacities to carry out their core activities. Kinsley's discussion of the ordering practices of social and spatial media

platforms hint at the ways in which existing social inequalities are programmed into the data structures, search/retrieval procedures, and representational forms of these technologies and then reiterated through their pervasive use. These contributions demonstrate the multiplicity and diversity of ways that the digital divide manifests and reproduces social difference and inequality.

Going forward, the presence of these persistent ambiguities and disparities underscores the necessity of moving beyond the utopian/dystopian opposition that has often framed discourse about new technologies.²⁶ These papers demonstrate tendencies toward alienation and inter-relation, marginalization and inclusion, surveillance and concealment, openness and closure and illustrate that these tendencies often emerge from the same digital functions or practices. With this in mind, it is evermore clear that the *collective processes* of remembering and paying attention with and through social and spatial technologies play a critical role in shaping their implications for cultural knowledge, social relations, and politics. Wilson and Kinsley rework and rethink technology-mediated memory, attention, and knowledge in transformative ways that allow us to consider how to counter some of their more troubling tendencies. In doing so, they open important avenues for all of us to build upon going forward. We are grateful for their contributions, as well as the reviewers' and journal editors' involvement in strengthening this collection.

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Notes

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