SHAPING INQUIRY IN CULTURE, COMMUNICATION AND MEDIA STUDIES

COMMUNICATION Matters

edited by Jeremy Packer and Stephen B. Crofts Wiley

Materialist Approaches to Media, Mobility and Networks

ROUTLEDGE

Communication Matters

Communication has often been understood as a realm of immaterial, insubstantial phenomena – images, messages, thoughts, languages, cultures, and ideologies – mediating our embodied experience of the concrete world. *Communication Matters* challenges this view, assembling leading scholars in the fields of Communication, Rhetoric, and English to focus on the materiality of communication. Building on the work of materialist theorists such as Gilles Deleuze, Michel Foucault, Friedrich Kittler, and Henri Lefebvre, the essays collected here examine the materiality of discourse itself and the constitutive force of communication in the production of the real.

Essays are arranged in four sections:

- *Orientations Media/Materiality* offers an introductory essay by the editors and features interviews with two leading scholars in the field: N. Katherine Hayles and John Durham Peters.
- *Communication Time/Space* explores the role of media, communication, and rhetoric in the production of spaces, temporalities, and relations of power.
- *Communication Assemblages/Networks* develops new theoretical approaches for apprehending the material aspects of communication networks and human-technological assemblages.
- *Communication Mobility/Immobility* assesses the development of communication and transportation infrastructures and technologies in relation to practices of mobility, immobility, and control.

Communication Matters presents original work that rethinks communication as material and situates materialist approaches to communication within the broader "materiality turn" emerging in the humanities and social sciences.

This collection will be of interest to researchers and postgraduate students in Media, Communication Studies, and Rhetoric.

Jeremy Packer is Associate Professor of Communication at North Carolina State University. He is the author of *Mobility Without Mayhem: Cars, Safety and Citizenship*, and the editor of *Foucault, Cultural Studies, and Governmentality*; *Thinking With James Carey: Essays on Communications, Transportation, History*, and *Secret Agents: Popular Icons Beyond James Bond*.

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Shaping inquiry in culture, communication and media studies

Edited by Barbie Zelizer
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Routledge
Taylor & Francis Group
LONDON AND NEW YORK

First published 2012
by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

Simultaneously published in the USA and Canada
by Routledge
711 Third Avenue, New York, NY 10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

Library of Congress Cataloging in Publication Data
Communication matters: materialist approaches to media, mobility, and networks / edited by Jeremy Packer and Stephen B. Crofts Wiley.
p. cm.—(Shaping inquiry in culture, communication and media studies)
Includes bibliographical references and index.
1. Mass media and culture. 2. Mass media—Social aspects. 3. Social interaction—Technological innovations. I. Packer, Jeremy. II. Wiley, Stephen B. Crofts.
P94.6.C663 2011
302.23-dc23
2011019887

ISBN 978-0-415-78224-1 (hbk)
ISBN 978-0-415-78225-8 (pbk)
ISBN 978-0-203-18109-6 (ebk)

Typeset in Sabon
by Book Now Ltd, London

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Acknowledgments

The present collection of essays developed from the first annual CRDM Research Symposium, "Materializing Communication and Rhetoric: Technologies, Infrastructures, Flows," held on September 25 and 26, 2009. The event was organized by the Ph.D. Program in Communication, Rhetoric, and Digital Media and was held in the historic Park Shops Building on the campus of North Carolina State University. We would therefore like to thank all the colleagues who accepted our invitation to share their work at that symposium and later to revise their essays for this book. We also thank the people who have supported the annual CRDM symposium at North Carolina State University: Jeffery Braden, Dean, and Vicki Gallagher, Associate Dean, College of Humanities and Social Sciences; Bill Kinsella, Director, Program in Science, Technology & Society; Ken Zagacki, Head, Department of Communication, and Tony Harrison, Head, Department of English. We extend a very special thank-you to the students, staff, and family members whose tireless efforts made this event possible: Robert Bell, Jacob Dickerson, David Gruber, Matt Morain, Shari Oliver, with additional assistance from Karla Lyles, Kevin Brock, Jon Burr, Jason Kalin, Seth Mulliken, Shayne Pepper, Jan Raymondi, Dana Squire, Jen Ware, Maurice Mathis, and Marylee Crofts. Videos of the symposium presentations are available online, at http://crdm.chass.ncsu.edu/symposium/videos.html.

The process of assembling the symposium essays into a book could not have been completed without the support of Barbie Zelizer, who agreed to include the book in her series, *Shaping Inquiry in Culture, Communication and Media Studies*, and the guidance of the superb editorial staff at Routledge, Ruth Moody, Natalie Foster, and Emily Laughton. We thank them for helping us bring this project to fruition. Finally, we thank Myriam Bascuñan and Sarah Sharma for their patience and encouragement. Day in and day out, they helped us make time to finish this book.

Part I

Orientations media/ materiality

Pantry Ghost (White chair, onto which cadaver slices are projected).
Francesa Talenti.

Introduction

The materiality of communication

Jeremy Packer and Stephen B. Crofts Wiley

What could be less material than communication? Signs and symbols, messages and meanings … the rhetorical strategies of logos, pathos, and ethos … the ethereal transmission of signals and the glow of vacuum tubes … the ephemeral quality of thought itself … the superstructural insubstantiality of ideology and culture. These conceptualizations of communication suggest a realm of intangible phenomena that mediate our embodied human experiences of the concrete world. In many ways, the immateriality of communication is the ontological assumption for mainstream theory in the fields of communication, rhetoric, and media studies. Within this familiar ontology, communication is always inadequate, an imperfect, or even manipulative attempt to represent the real or connect with others through various mechanisms of signification. Critical theory, too, has been predicated on textualist, narrative, semiotic, or ideological paradigms, and the epistemological quandary that this ontological assumption creates has led numerous scholars over the past two decades to identify a poststructuralist impasse that needs to be escaped. Such discontent has often led to a turning away from "mere communication," toward materiality as a corrective.

The chapters in this volume comprise a series of such correctives, although their strategies for materializing communication are diverse. One such strategy is to figure materiality as physicality. Infrastructure, space, technology, and the body become the focus, a move that situates communication and culture within a physical, corporeal landscape. Another move is to examine the materiality of communication itself, focusing on discourse as inscription in the material strata of sound, optical media, the built environment, and the brain. In this view, which draws on both posthumanism and medium theory, discourse itself (including thought as self-communication) is a material process, whether it is physiological, mechanical, or digital. A set of relays and traces moves across the sensorium and its milieus – across the neural networks that thread through the body, increasing in density inside our heads, and through the infrastructure that envelops the planet. As John Durham Peters says in this volume, reflecting on the recent convergence of media studies, cognitive science, and brain imaging, "Our brains are quite literally on fire."

The move toward materiality in the fields of communication and rhetoric appears to be part of a broader shift toward a new materialist realism that spans the humanities and social sciences. The authors in this volume draw upon and engage with critical geography, cognitive science and neurobiology, communication history, mobility studies, philosophy, neo-Marxism, media studies, science and technology studies, and cultural studies to enliven and ground materialist approaches. Following a long period of focusing almost exclusively upon the problematics of language, meaning, and representation, there has been a renewed interest in establishing means for making claims about the real. Where critical theory had been oriented toward the problematic relationship between discourse and reality, leading to dead-end debates over truth and falsity and a textual politics of deconstruction and ideological critique, there are now attempts to set aside epistemological debates in order to compose new ontologies that enable theoretical innovation and political intervention. As Katherine Hayles notes in her interview, the recent philosophical move into speculative realism is one such attempt.

This book assembles the results of one recent effort to think through the implications of a materialist approach to communication and rhetoric. We gathered the authors of this volume for a two-day symposium at North Carolina State University in September of 2009. That event confirmed our belief that scholars investigating media and communication have much to add to an understanding of materiality. We would suggest that scholars in other fields will also benefit from the work presented here, which demonstrates the constitutive role of communication and media in the production of the real. Five materialist thematics emerged at the symposium and became more pronounced as the authors completed their chapters: economy, discourse, space, the body, and technology. The authors rarely focus on only one of these themes. Rather, their approaches to materiality are grounded in differing configurations of two or more of these thematics: technology and body; space and economy; body, technology, and discourse, and so on. While we do not suggest this list is exhaustive or even epistemologically hermetic, it does encompass an important array of considerations that need to be accounted for if the field wants to move beyond the immaterial impasse.

Economy

The recent turn to materiality entails a number of ontological and phenomenological concerns that range far beyond the classical historical materialism of Marx and Engels, yet the lens of "economy" continues to be rooted in a Marxist sensibility and remains a key optic for examining the materiality of communication and culture. The authority of economic theory, whether Marxist or neoclassical, has often rested on a depth model in which the economic is figured as an underlying, more fundamental structure in relation to which the less tangible, and less determining superstructure – communication,

culture, ideology … in short, the realm of the symbolic – must be understood. One can and should produce alternative readings of Marx, particularly by focusing on the most empirical and historical of his analyses, but the fact remains that most neomarxists (the critical theorists of the Frankfurt School as well as present-day political economists of communication) have relied on the dualism of the base–superstructure model to figure "economy" as the more material, more real, foundation of communication. Gramscian and Althusserian analyses sought to complicate the dualism of the model, arguing for a more constitutive concept of culture as ideology or hegemony, yet in many ways contemporary thinkers have retained a notion of the economic as a realm of the real, over which or upon which culture is constructed. As John Durham Peters notes in this volume, this approach to "economy" (as well as a similar position that is often articulated around the concept of "technology") can be seen as "a kind of rhetorical blackmail in being more materialist than thou … a kind of bullying that goes along with claiming to be a materialist."

Attention to "the economic" is thus a classical move within materialist traditions of social theory, but the contributors to this book endeavor, in various ways, to move beyond the conceptual frame of base and superstructure. Here, the economic is not seen as a separate realm of the real underlying communication and culture; rather it is understood as *a specific logic of social, material, and cultural organization* expressed in a range of different contexts, including the production of urban space (Hay), the composition of geographical regions as fields of social interaction (Parks and Sheller), the role of technical media in the everyday practices of laboring subjects (Greene, Packer and Oswald, Sharma, Sloop and Gunn), and the assembling of new translocal social spaces via networked social relations (Wiley, Moreno, and Sutko). In these materialist analyses, the present authors draw substantially on the work of Foucault, Lefebvre, and Deleuze to examine the economic logics at work in two key contemporary processes: the production of space and the production of subjects.

For a number of the authors in this book, the objective is to rethink the production of social space as a response to, and perhaps a struggle over, historically situated projects for the capitalist (re)organization of production, labor, technical infrastructure, the built environment, and social practices. Mimi Sheller's essay on the airport as a site of surveillance and control of mobility reveals the ways in which differential mobilities – of bodies, of capital, of images – constitute the Caribbean as a region that is opened up, on the one hand, to the inward flows of investment and tourism, and regulated, on the other, to manage or block unwanted outward flows of migration. Lisa Parks' analysis of the destruction and rebuilding of Iraq and Afghanistan reveals these campaigns as projects for the restructuring of space in which military and economic logics govern both the dismantling of older communication infrastructures and the (commercially contracted) building of new infrastructures for communication, remote sensing, and surveillance. Steve Wiley, Tabita Moreno, and Dan Sutko, like James Hay,

draw on Lefebvre's (1991) approach to social space as the production of the social relations of production. Given the context of globalization, they argue that social space must be rethought from the standpoint of social networks, mobilities, and translocal media.

For Hay, the work of Henri Lefebvre and Michel Foucault provides the conceptual foundation for a new analytical framework – spatial materialism – in which urban space may be understood as a reorganization of both the built environment and networks of technical media in ways that enable the production of neoliberal subjects. As Hay notes, neoliberalism is here understood from a Foucauldian framework within the long history of the "reason of State" where "political economy" was instrumental to "governmental rationalities" concerned with the limits and capacities of the Modern liberal State. In this sense, economy is both *produced by* differing and competing forms of governmental reason and *productive of* new forms of subjects. Economy is not only productive "in the last instance"; it is itself produced by power/knowledge relations and the activation of "free" subjects. Some of the present authors follow this Foucauldian line of enquiry, situating communication within such economic programs. Ron Greene examines the YMCA's use of film and rhetorical training as pastoral techniques of power. These strategies were evident in the struggle to minimize class conflict, in part by forming rhetorical subject/critics at the behest of capital during the 1920s and 1930s. As Greene suggests, "To recognize textual commentary less as a generalized art of rhetorical interpretation, and more as a technology of the self is to pay closer attention to the institutionalization of textual commentary and modern criticism." Kathleen Oswald and Jeremy Packer suggest that the production of "free subjects" via mobile media screens allows for the reorganization of flows of people, goods, culture, and capital in alignment with the potentialities, freedoms, and dictates of a neoliberal rationality.

Discourse

One of the most difficult questions for a materialist theory of communication concerns the ontological status of discourse itself. We noted at the beginning of this introduction that communication is often seen as immaterial – as a layering of human perception, thought, language, and symbol over the real or, in a thoroughly phenomenological view, the social construction of reality itself in language and culture. This dualist ontology can be traced through Plato, Descartes, Kant, and Hegel to phenomenology (Heidegger, Husserl, and Schutz); structuralism (Saussure, Levi-Strauss, and Althusser) postmodern and poststructuralist theory (Baudrillard and Derrida); and present-day "mainstream" theories of communication, culture, language, and rhetoric. A dualist ontology places the analyst in an apparently irresolvable paradox: any attempt to think "the real," including theory itself, is

inevitably a discursive construction trapped within historically specific languages and worldviews. Taken to its logical extreme, ontological dualism led to postmodern relativism and a textual politics of deconstructionism.

The current turn to materiality may be, as the editors of *New Materialisms* note, largely a reaction to the exhaustion of that text-centered, social-constructionist paradigm (Coole and Frost, 2010). This was already clearly evident among German media scholars as early as the late 1980s, as manifested in the collected volume *Materialities of Communication* (Gumbrecht and Pfeiffer, 1994, originally published as *Materialitat der Kommunikation* in 1988). As its coeditor, K. Ludwig Pfeiffer, noted, "The point then … is not a search for the reality of the material or the materiality of the real. We are looking for underlying constraints whose technological, material, procedural, and performative potentials have been all too easily swallowed up by interpretive habits" (p. 12). Here, we identify three strategies for materializing discourse – three ways in which recent work, including that of the contributors to this book, has sought to move beyond the text-centered (or message-centered) approach to communication that has prevailed during the last few decades. As noted above, political-economic analysts attempt to recuperate the materiality of discourse by focusing attention on the economic, spatial, technological, or corporeal *context* within which meaning is constructed. Others have turned the base–superstructure model on its head, noting the discursive or rhetorical properties of embodied, physical reality. And finally, a number of theorists have built on the ontological monism and posthumanism of Foucault, Deleuze, and others to analyze the materiality of discourse itself.

A familiar materialist move is to locate culture or meaning within an economic, physical, or embodied *context*. In this approach, the turn toward materiality is a turn *away from* textuality, meaning, and deconstructionism in order to grasp the real – economy, technology, physical space, the body – as hard external ground. Characteristic of this approach is arguments in favor of political economy as a kind of *realpolitik* of communication. Yet such an approach to materialism reproduces a dualist ontology in which the move toward materiality is simply a corrective that functions by "going back" to the physical, the infrastructural, the corporeal, or the economic "base" as a recuperation of what really matters. Such an approach reifies and takes for granted discursively or rhetorically constructed "hard" realities such as technology, money, the economy, policy, and corporations (i.e., it accepts given realities too quickly, failing to recognize their status as historically situated discursive regimes), and it fails to recognize the materiality of discourse itself, the material properties of statements that determine a number of important capacities: Are they reproducible, processable, translatable, transmittable, transportable, and physiologically effective?

A second strategy for recuperating the materiality of discourse is one that is employed by a number of the contributors to this book. Working one vein of the tradition of material rhetoric (see, e.g., Biesecker and Lucaites, 2009),

these theorists see physical reality itself (embodied practices, physical sites, and urban spaces) as rhetorical and communicative. As Victoria Gallagher, Kelly Martin, and Kenneth Zagacki note in their study of Chicago's Millennium Park, "scholars in rhetoric have taken materialistic principles and, by applying them to artifacts and structures within urban spaces, shown how they function to encourage and evoke interaction and feeling." William Balthrop and Carole Blair focus attention on the rhetorical properties and effects of commemorative sites themselves, including the spatial practices of visitors. Jeff Rice develops a rhetorical performance to reveal – or even produce – the networks of decision making that compose urban space.

A number of contributors to this book develop a third strategy of materialization – one that seeks to grasp the materiality of discourse itself. One means for moving beyond both hermeneutics and structuralism as a means for understanding the materiality of discourse has been in circulation at least since Foucault proposed a new form of discursive investigation in *The Archeology of Knowledge* (1972). Foucault attempted to address the presence of statements – the brute fact that one statement exists as opposed to others. Kittler added media to Foucault's concerns by showing how specific media, as elements in discourse networks, make certain statements possible, even probable – statements that were impossible prior to the invention of media such as film or the phonograph (1999). Such an orientation toward *media inscription* highlights technological storage and processing. However, Bernd Frohman's explanation of *documentality* opens up the possibility for thinking all material as potentially discursive. In Frohman's terms, everything, including an antelope, has the potential to communicate, to become a statement, but it must be made to speak. Building on DeLanda (2006, 2007), Frohman argues that such potentiality can only be realized within specific "assemblages." Byron Hawk also employs the concept of assemblage to rethink rhetoric as an incorporeal, yet material element in the constitution of life. Hawk's intervention builds on the vitalist tradition of Agamben (2004) and Deleuze and Guattari (1987) to "put rhetoric in a materialist flow that acknowledges both corporeal and incorporeal aspects and functions of rhetoric's role in emergence … " As Hawk argues, "Such rhetorics of (non)communication operate in the movements and relations of bacteria, the swarms and flows of bees and ants, the birds' transitions among territorial and courtship assemblages, and the movements of people through Chicago's Millennium Park."

Other contributors to this book understand discourse as a material process that crosses human–environment boundaries. Peters' suggestion that we treat mollusks as media, as carriers of historical data, echoes some of this sensibility, though he notes that there must always still be a witness for any statement to exist, for communication to occur. Katherine Hayles' assertion that discourse must be understood as cognition and information processing – processes that are not exclusive to humans – may offer an alternative to

Peters. From a distributed cognition perspective, "discourse" is understood as moving across and through human–machine networks, a view that decenters human thought and emphasizes the increasingly powerful role of computer processing in relation to human cognition. Mark Hansen's analysis also shifts the focus from traditional understandings of discourse centered on thought, language, semiotics, and persuasion, to a focus on sensibility – the preconscious processes of sensation and cognition that occur prior to the perception of a meaningful phenomenal world. Such a suggestion treats meaning as epiphenomena of more fundamental, diffuse, and less human-centered processes of composition.

Technology

Communication always manifests through technology if our definition is open to conceiving language as a technology. From such a perspective technology refers not only to modern devices. Rather, a rich tradition of scholarship has shown us the importance of the technological aspects of speech (Ong, 2002), the printing press (McLuhan, 1962; Eisenstein, 2005), writing (Havelock, 1988), books (Kittler, 1992), stone tablets, paper, and papyrus (Innis, 1950), maps and clocks (Galison, 2004), money (Simmel, 2004/1904), and calendars, clocks, towers (Peters, in press). In some ways a focus on technology, the technical or procedural means through which communication is enacted, seems self-evidently materialist. After all, the projector, film, screen, seats, and theater exist in the material realm. They are physical and embodied, and lasting in ways that the flickering image of a movie is not. Such a division between content and medium does remain in much contemporary scholarship. At times media technologies only seem to matter in terms of how the meaning of content might be altered by the mode of expression. However, for the majority of authors in this volume, technology matters in far more consequential ways. For some (Hay and Greene), technology is very broadly conceived, following from Foucault, to include technologies of governance or technologies of the self in which communicative forms and norms are merely a part. For others (Parks, Peters, Sharma, and Wiley, *et al.*), the most permanent aspects of technology, infrastructure, are shown to matter even where they may seem imperceptible, particularly as they enable mobility and control (de Souza e Silva and Frith, Gunn and Sloop, Oswald and Packer). Some authors (Hansen, Hayles, Hillis, Slack, and Wise) treat technology as an environment or milieu in which the human is constituted.

Both James Hay and Ron Greene explicitly draw upon a Foucauldian understanding of technology as a means for analyzing two different material aspects of communication. In an interview given rather late in his life, Foucault suggested a fairly straightforward means for thinking about technology. He said one should focus on *tekhne*, "a practical rationality

governed by a conscious goal," not "technology" understood too narrowly in his view as "hard technology, the technology of wood, of fire, of electricity." He further suggested that "government is also a function of technology: the government of individuals, the government of souls, the government of the self by the self, the government of families, the government of children, and so on" (Foucault, 2000). Hay takes up such considerations when he examines how media technologies are envisioned as part of a series of historical attempts to implement differing governmental rationalities of urban renewal which envisioned media as mechanisms for extending and organizing the governance of urban space and citizens. Greene investigates how rhetoric serves as a technology of the self within the YMCA's pastoral formation of power by which it attempted to govern working subjects. For Greene, film, a "hard technology," was a mechanism by which audiences were brought together in front of specially trained rhetors who could articulate a new pastoral relationship between film, audience, the YMCA, and capital.

All of the relatively recent shifts in media technology that mark the ascension of digital over analog have demanded new forms of infrastructure. As Kittler (1999) has noted, such ascent does not lead to immateriality: the digital is materialized as light pulses within fiber optic infrastructure, created to maintain command and control networks that could survive a nuclear war. In her analysis of satellite imaging technologies, Parks suggests that the materiality of communication infrastructure is very often purposely designed to be invisible in order to hide various relations of power exerted by media. Thus, the historical focus upon the representational may be seen as perpetuating a framework in which infrastructure, data networks, and the decision making that governs them remain unseen. Peters uses the term "logistical media" to stress the infrastructural role of media in terms of storage, time and space, and processing. Such a focus shares much with Kittler's historical work (1999, 2010) and, as Peters suggests, helps us to realize that the audiovisual media that have dominated the fields of media studies and communications were historical peculiarities, not the norm.

A number of the contributors to this book examine these issues via the analysis of concrete conjunctures. Oswald and Packer describe mobile media as the new infrastructure for what they term "screening technologies." Such "screening" reorients how data/bodies are moved, tracked, and guided through highly individualized yet controlled regimens. Where Gunn and Sloop, Oswald and Packer, and Sharma see mobile media as part of capital's neoliberal project, de Souza e Silva and Frith see mobile devices as largely empowering individuals with the ability to control their experience of public space. For Joshua Gunn and John Sloop, publicity itself has been reoriented by social and mobile media, with the effect that the very logics that serve to distinguish public from private are being reorganized. Sharma directs our attention toward what she calls a "temporal infrastructure" that is only in part made up of various media technologies, but also includes

attendant forms of labor and organization necessary to manage people's relationships to time.

Many of the authors in the volume would agree that technologies – understood as technical media environments in which we are increasingly immersed – play a fundamental role in the composition of historical forms of sensation, cognition, experience, consciousness, and subjectivity. However, some authors find these processes of particular import. Peters, Hayles, and Hansen, drawing frequently on the work of Friedrich Kittler, suggest that different technical media and media environments entail different capacities and limitations, thus altering the forms that human, and human–machine, cognition can take. For Ken Hillis, new digital media environments such as webcam-based interactions produce a new spatial-material relation of bodies – telepresence – which goes beyond audiovisual representation and interpretation to constitute an experience of real connection. This approach gives technical media a constitutive role in the production of embodied experience, a sensibility that is also evident in the work of both Greg Wise and Jennifer Slack. Wise, like Hansen and Hayles, is concerned with the locus of cognition within arrangements that radically decenter human subjectivity. If perception and cognition are distributed across human–machine assemblages, Wise argues, then attention is not a mere outcome of a human "executive" faculty of cognition, but rather is an expression of the assemblage itself.

Space

In some ways, the recent interest in materiality may be characterized as a broadening and deepening of the earlier "spatial turn" in social theory in the late 1900s, a shift that may have been associated with a waning confidence in history as the realm of progress and expanding freedom. Attention to questions of space may also be seen as a theoretical response to two perceived shifts in the social world: an acceleration in the mobility of people, goods, money, and media (Appadurai, 1990; Clifford, 1992; Sheller and Urry, 2006), and an apparent deepening of the interconnection and interdependence of disparate networks, places, processes, and social relations (Castells, 1996, 2009; Giddens, 1991; Hardt and Negri, 2001, 2004). In both cases – as an internally felt frustration with the limits of dialectics and history, or as an externally motivated response to pressing changes in the world around us – the spatial turn led to a rethinking of communication as a material element in the production of places and territories.

In this context, a number of contributors to the present volume analyze space by reanimating an older understanding of communication as the overcoming of barriers in order to facilitate the movement and interaction of people, goods, and culture. Charles H. Cooley, an influential figure in the Chicago School and Social Psychology, argued in his 1894 dissertation that the two arenas of physical transport and the transmission of information

should no longer be considered together, reinforcing, in the field of communication, a division between the physical and the symbolic. Later scholars, such as James Carey, would seek to reassemble these two modes, but this often reproduced the initial dualism while simultaneously arguing against the limitations inherent in conceptualizing communication as the merely symbolic. In this view, communication can be understood as a practice of connecting, bringing together, assembling, or arranging – a practice that entails both corporeal (embodied) and incorporeal (enunciative) expressions. This has led to recent work that focuses on communication infrastructure, transportation and mobility, mobile technologies, and the production of urban, regional, and translocal social spaces.

A number of authors in the present volume take up this materialist approach to communication as the production of space. For Hay, urban space is "the production of a spatial arrangement, a complex of interdependent facilities (the 'mediations' and 'cultural technology') of liberal citizenship." Similarly, for Sheller, space is composed of differential mobilities and immobilities whose contradictory logics become apparent in the practices of airport security, migration and tourism, and transnational financial flows. Like Hay and Sheller, Parks works outside the traditional paradigm of communication as representation. Instead, she considers the military and commercial logics shaping the construction of new Web 3.0 communication and information infrastructures that constitute territories of surveillance, control, and economic development in theaters of war. Wiley, Moreno, and Sutko propose a model of non-Euclidean social space as an assemblage of social, technical, and transportation networks. Like Hay, they begin with Lefebvre's conceptualization of space as the production of the social relations of production, but they go on to argue for a "hydrological" analytical strategy that permits the discovery of networked, translocal social relations.

While the aforementioned authors examine the production of space on the scale of the city, region, or transnational network, several of the contributors to this book focus on the practices and experiences of individuals as they employ new media technologies in everyday life. Ken Hillis, for example, rethinks space and mobility as they are constituted in mediated interactions such as webcam sessions and Second Life. The indexicality of webcam images and avatars – their real-time connection to participants' bodies – allows such interactions to be "increasingly positioned as seemingly actual spaces in which aspects of actual humans have come to reside." For de Souza e Silva and Frith, location-aware mobile technologies and practices change users' experience of urban space, allowing users "to further control how they manage their interactions with nearby people and information." Sloop and Gunn also take up the spatial implications of mobile technologies and social media. They examine control from a different angle, however. Updating Raymond Williams' concept of mobile privatization, they argue that the relation between technology, mobility, domesticity, and privacy must now be rethought in the context of what Deleuze (1997) termed the

society of control. Sharma also focuses attention on spaces of everyday life but argues against the now-dominant spatial turn, pointing out that an exclusively spatial analysis neglects the fundamental importance of temporality in structuring relations of power. As with other analyses of technology and social space, these contrasting perspectives point to the paradoxical and possibly contradictory logics at work in the material infrastructures of communication.

In a somewhat parallel set of developments, rhetorical scholars have also turned to the analyses of space as one strategy for thinking about the materiality of communication. Characteristic of this move is the interpretation of physical space – public parks, commemorative sites, and entire neighborhoods and cities – as performing a rhetorical function. Balthrop and Blair, for example, interpret the World War I commemorative sites of the Western Front as "practiced and produced" places whose "borders, character, and 'authenticity' [are] rhetorical effects." Similarly, Gallagher, Martin, and Zagacki employ classical rhetorical concepts to interpret Chicago's Millennium Park – "literally its brick and mortar construction … as an important physical infrastructure of communication." Rice's performative analysis of a particular region of Detroit, 8 Mile Road, also takes a physical site as its object, interpreting, via the author's individual memories and participatory observations, the ways in which "physical space offers a rhetoric of decision making within networked culture." For these material–rhetorical analyses, "materiality" is understood as physicality, and a materialist analysis entails the application of rhetorical strategies of interpretation, critique, and invention to the ways in which physical, embodied, and networked spaces exert rhetorical effects.

Bodies

One of the themes that runs through many of the chapters that follow is the materiality of the body. We see such a grounding as stemming from at least three overlapping lines of thought. First, communication may be seen as an always-imperfect attempt to reconnect, and a focus upon the embodied practices of rhetoric and communication is one attempt to address such a dilemma. As John Peters states, "Bodies can touch but minds cannot, and that's the fundamental dilemma of communication." Second, bodies have become networked into increasingly extensive media, a situation that demands new understandings of the body/media relation. Following McLuhan and Kittler, media are understood quite literally as "extensions of man (sic)" that are necessarily respondent to the limited bandwidth of human senses. Third, building upon Michel Foucault's understanding of biopower and the monist, materialist posthumanism of Deleuze and Guattari, a number of our authors see material embodiment in terms of the power relations and forms of knowledge that work upon the interlinked capacities of individualized bodies and

populations. Our networked media bodies are implicated in biopolitical struggles that cross human, animal, and technological thresholds – a state of affairs that forces us to recognize that the body is more diffuse, less fixed, and more pervious than once was thought. Media are central to such extension and malleability.

The dream of overcoming communication's immateriality is addressed by authors in this volume through various categories or definitions of embodiment. Ken Hillis argues that the indexical nature of visualizing the body in real time via networked media creates the experience of bodily interconnection. By drawing attention to the embodied enactment of rhetorical performance, Ken Zagacki, Vicki Gallagher, and Kelly Martin examine how bodies experience Chicago's Millennial Park as a "Communicative City." Similarly, Balthrop, Blair, and Michel's account of memorials as material enactments focuses attention on the constitutive role of embodied performances. For Hillis and these rhetorical scholars, the body's "being there" matters for how we make sense of the line dividing the material from the immaterial.

Media and communication alter what the body can be and how it can interface with the world. Drawing upon the work of McLuhan and Kittler, several authors address how the body is extended or networked. In the most radical of such formulations, the body is simply the sum of these extensions. Acknowledging the influence of McLuhan, Joshua Gunn and John Sloop argue that all media alter the body, particularly in its movements, and mobile, "social" media do so to a greater extent than previous forms. Both John Peters and Katherine Hayles are interested in building upon Kittler's understanding of "the senses as processing devices" (Peters). For Peters, this demands a recognition that all signification has an immediate material dimension. Hayles argues for the formative force of technical media but calls for greater attention to embodiment and experience – elements of distributed cognition that crosscut human and machinic strata and work to constitute specific historical productions of "the human." Mark Hansen also analyzes the body and its sensory capacities in relation to technical media, especially the ubiquitous media environment of the contemporary moment, in the production of experience. Hansen reworks the phenomenology of Husserl, Whitehead, Sartre, and Fink within the context of recent neurobiology and ambient media art to argue that human consciousness is a function of the resonances of the microtemporalities of environmental "worldly sensation." According to Hansen, such a recognition decenters human sensation by situating it within other temporalities, both mediated and natural.

Greg Wise and Jennifer Slack each draw upon a Deleuzean understanding of *agencement* (arrangement or assemblage) to offer new conceptions of communication's role in bodily configurations. For Wise, attention is an expression of an assemblage of the body and its milieu – a milieu that is increasingly constituted through networked media technologies. Agency is immanent to the assemblage, which organizes bodies and technologies in specific configurations that constitute varying forms of subjectivity and

agency. In differing ways, Hayles, Hansen, Wise, Slack, and Sharma all make evident that a materialist approach to communication and the body does not narrow our focus of analysis; rather, it demands that we recognize the body as both pervious and extensive – that it is but one element (and a particularly reified element, at that) in a broader configuration out of which "the human" emerges. Indeed, Slack extends this line of thought to question the basic assumptions underlying the field of communication – its historical focus on transmission, modes, and media. If the posthuman body is constituted in the midst of a whole range of technological, biopolitical, and interspecies relations, Slack argues, then the field of communication must broaden its scope radically or risk being left behind as other fields take up the conceptual, practical, and political challenges of the new context.

Conclusions

Clearly, a volume such as this cannot propose a singular point of departure or line of thought for investigating the materiality of communication. However, taken as a whole, these essays do more than merely provide some new possibilities or offer suggestions for future work. It should become clear that the authors in this volume are struggling with the messiness of materiality conceptually, methodologically, and practically. The philosophical and political outcomes of these endeavors are not guaranteed. But of the various attempts to move beyond the modern and postmodern quagmires we have outlined, there seems to be some general agreement that our material existence needs to be given a fuller account. We have located five mechanisms for orienting such an account (economy, the body, discourse, space, and technology), none of which should be wholly surprising. However, once assembled, these mechanisms start to take shape and repeat movements in consistent and measured fashion. How to monitor, gauge, and trace such movements is not yet fully clear. We wonder if there is not a more able cipher than the editors, which could be unleashed upon this volume to decrypt this materialist knowledge-producing apparatus into being.

References

Agamben, G. 2004. *The Open: Man and Animal*. Stanford, CA: Stanford University Press.

Appadurai, A. 1990. Disjuncture and difference in the global cultural economy. *Public Culture* 2(2):1–24.

Biesecker, B., and Lucaites, J.L. (Eds.). 2009. *Rhetoric, Materiality, and Politics (Frontiers in Political Communication)*. New York: Peter Lang.

Castells, M. 1996. The space of flows. In M. Castells (Ed.), *The Information Age: Economy, Society and Culture. Volume I: Rise of the Network Society* (Chapter 6, pp. 376–428). Malden, MA: Blackwell Publishers.

Castells, M. 2009. *Communication Power*. London: Oxford University Press.

Clifford, J. 1992. Traveling cultures. In L. Grossberg, C. Nelson, and P. Treichler (Eds.), *Cultural Studies*. New York: Routledge.

Coole, D., and Frost, S. 2010. Introducing the new materialisms. In D. Coole and S. Frost (Eds.), *New Materialisms: Ontology, Agency, and Politics*. Durham, NC: Duke University Press.
Cooley, C.H. 1894. *The Theory of Transportation*. Doctoral Dissertation. University of Michigan, Ann Arbor.
DeLanda, M. 2006. A new philosophy of society: Assemblage theory and social complexity. New York: Continuum.
DeLanda, M. 2007. The philosophy of Gilles Deleuze. Retrieved July 8, 2007 from http://www.youtube.com/watch?v=zqisvKSuA70&feature=user
Deleuze, G. 1997. Postscript on control societies. In G. Deleuze (Ed.), *Negotiations: 1972–1990* (pp. 177–182). New York: Columbia University Press.
Deleuze, G., and Guattari, F. 1987. *A Thousand Plateaus: Capitalism and Schizophrenia*. Minneapolis, MN: University of Minnesota Press.
Eisenstein E.L. 2005. *The Printing Revolution in Early Modern Europe*. Cambridge: Cambridge University Press.
Foucault, M. 1972[1969]. *The Archaeology of Knowledge*. Translated by A.M. Sheridan Smith. Originally published as L'Archéologie du Savoir. New York: Pantheon.
Foucault, M. 2000. Space, knowledge, power. In J. Faubion (Ed.), *Power: Essential Works of Foucault 1954–1984* (pp. 349–364). New York: New Press.
Galison, P. 2004. *Einstein's Clocks/Poincare's Maps: Empires of Time*. New York: W.W. Norton.
Giddens, A. 1991. *Modernity and Self-Identity: Self and Society in the Late Modern Age*. Cambridge: Polity Press.
Gumbrecht, H.U., and Pfeiffer, K.L. (Eds.). 1994[1988]. *Materialities of Communication*. Stanford, CA: Stanford University Press.
Hardt, M., and Negri, A. 2001. *Empire*. Cambridge, MA: Harvard University Press.
Hardt, M., and Negri, A. 2004. *Multitude: War and Democracy in the Age of Empire*. New York: Penguin Press.
Havelock, E. 1988. *The Muse Learns to Write: Reflections on Orality and Literacy from Antiquity to Present*. New Haven, CT: Yale.
Innis, H. 1950. *Empires of Communications*. Oxford: Clarendon.
Kittler, F. 1992. *Discourse Networks 1800/1900*. Palo Alta, CA: Stanford University Press.
Kittler, F. 1999. *Gramaphone, Film, Typewriter*. Palo Alta, CA: Stanford University Press.
Kittler, F. 2010. *Optical Media*. New York: Polity.
Lefebvre, H. 1991. *The Production of Space*. Translated by Donald Nicholson-Smith. Oxford, UK and Cambridge, MA: Blackwell.
McLuhan, M. 1962. *Guttenberg Galaxy*. Toronto: University of Toronto Press.
Ong, W.J. 2002. *Orality and Literacy: The Technologizing of the Word*. 2nd edition. New York: Routledge.
Peters, J.D. in press. Calendar, clock, tower. In J. Stolow (Ed.), *Deus in Machina: Religion and Technology in Historical Perspective*. New York: Fordham University Press.
Sheller, M., and Urry, J. 2006. The new mobilities paradigm. *Environment and Planning A* 38:207–226.
Simmel, G. 2004/1904. *The Philosophy of Money*. New York: Routledge.

Chapter 1

Media, materiality, and the human

A conversation with N. Katherine Hayles

Conducted by Stephen B. Crofts Wiley on October 20, 2010, in Durham, North Carolina

STEVE WILEY: You argued nearly twenty years ago, in your essay on the materiality of informatics,[1] that theorists need to resist the "absorption of embodiment" into discourse, which you characterized as typical of Foucault's analysis and other kinds of abstract studies of power. So the idea of thinking about the materiality of information is not a new question for you, but it was new to many of the presenters at the NC State symposium, "Materializing Communication and Rhetoric, Technologies, Infrastructures, and Flows." The symposium brought together scholars from a range of perspectives in rhetoric, literature, media studies, communication, and cultural studies, to consider the materiality of communication and rhetoric. The symposium's topic was taken up in a number of different ways. Some participants, such as Jeff Rice, Bill Balthrop, and Carole Blair,[2] offered rhetorical analyses of physical spaces such as monuments or urban spaces. Others focused on infrastructures and interfaces, such as Lisa Parks' analysis of the transition to digital broadcast television in the US and Adriana de Souza e Silva and Jordan Frith's work on mobile interfaces. Others, such as Mark Hansen and Greg Wise, asked us to consider the materiality of physiological, affective, and cognitive processes such as sensation and attention. And still others such as John Durham Peters, Ron Greene, Jeremy Packer, and Kathleen Oswald offered more holistic, historical analyses that considered the complex articulations of technical media with discursive formations and social practices. So, there was a broad range of understandings of materiality. Could you comment on the different ways in which materiality is being conceptualized today and incorporated as a focus of contemporary theory?

N. KATHERINE HAYLES: You did a very good job of summarizing the talks and different approaches, so I'm not sure what I can add except to highlight some of the major trends focusing on the materiality of media. I think here of people like Friedrich Kittler, for example. There were some examples of that approach in the conference as well. The idea that materiality is embodied in physical space is another important notion, although not new of course to geographers. A dominant trend now in

geography is to think about physical spaces as always in tension with social practices. What a geographer like Doreen Massey might mean by social space, then, is a hybrid interaction between the possibilities offered by the physical space in relation to the interrelationships developed within that space that help to define and configure it. You mentioned materiality as a consideration of embodiment and embodied practices, and I would identify that as another important thread. In my recent work, my focus on materiality has tended toward questions about attention – attention as that property of human cognition that selects from an infinite range of physical attributes some characteristics for analysis, critique, and exploration. In that sense, materiality for me is also a hybrid. But it's a hybrid between human cognition and physical characteristics. This is somewhat different than Kittler's approach, because it takes a human perspective into account. It would be somewhat similar to the social space that geographers are interested in but instead of social space in general, it focuses more on media.

WILEY: At the outset of your symposium talk, you quoted from a paper about Kittler written by Sybille Kramer,[3] which looked at how technical media manipulate the axis of time. One criticism Kramer had of Kittler, in another part of that same article, was that the body is left out. Is that the critique that you're offering here of Kittler's work?

HAYLES: Of course, I agree with Kramer's critique of Kittler in this regard. As I remember Kramer's quotation, her point is that media manipulate the axis of time and displace it into space, so her particular interest is in the way that time *becomes* space within media representation. That seems to me a quite insightful formulation of what media do to represent time. They don't represent time directly; they represent time by transcribing it into space and then use space to regenerate a time series. In that sense, I would say Kramer's argument is allied with the argument that Bernard Stiegler makes in "Technics in Time."[4] That is, he's talking about tertiary memory as a mediated remembrance for which there's no first-hand recall. He's very interested in the way in which memory and time get reconstituted through media representations. That opens onto a deep problem of how to represent time as something other than spatialized measurement, and for this, bodily processing and perception are central, as Bergson recognized with his concept of duration.

WILEY: So, in order to develop a more adequate materialist understanding, we need to look not only at the materiality of technical media, but also at the embodiment of experience, sensation, attention, and cognition in relation to technical media. As some of the symposium presenters put it, we would need to look at *assemblages* of technical media and embodied human beings.

HAYLES: "Assemblage" seemed to be the keyword for the conference. I heard it used in presentation after presentation. I think assemblage is a convenient word precisely because it's so vague. If we think about assemblage

in a Deleuzian context, however, it has a more specific meaning which often didn't seem to be closely related to the ways I heard it being used at the conference. My criticism of "assemblage" in this context is that it is in danger of losing any specificity at all and becoming a convenient catch-word to talk about whatever you want to talk about.

I'd like to bring the conversation back for a moment to Kramer's comment about spatialized time. One of the points of contestation in contemporary media theory is precisely what the relationship is between space and time. In Kramer's formulation, time gives way to space when it is represented within media. In some of my recent work, I have been looking at spatial history. History as a field has traditionally focused on time and change over time, but in spatial history *practices*, because they're using GIS and relational databases, time is difficult to represent in itself as the major parameter because such representations would work against the grain of what is easy or convenient to represent with the technology. As Richard White likes to say, if space is the question, movement is the answer.[5] To rephrase, given techniques that are spatial in nature and emphasize space, how do you then incorporate time into your analysis? In response, Ruth Mostern,[6] for example, has been arguing for the importance of the event for historians. An event combines both time and space; it's temporal in nature, bounded by a discrete time interval, and located at a specific place. She argues for a shift in the technological representation within a database from static spatial references to event. Such proposals raise really interesting questions because they bear on the influence of media and the way media make certain questions easy to ask and other questions almost impossible to ask. The formative effect of relational databases, and more generally GIS and GPS technologies, in directing the course that spatial history can take is a really important issue.

WILEY: In your talk you discussed Philip Ethington's project, which uses GIS to represent the history of Los Angeles as a series of spatial layers. You argued that, although this approach opened up possibilities by having a kind of layering of moments, events, or contexts on top of one another, there were still ways in which the temporal dimensions might be opened up further. You went on to talk about object-oriented databases, as opposed to relational databases, as opening up those possibilities. Are you suggesting that it's time for a dialectical resolution of this time-versus-space argument of modernity – where we had our spatial turn in order to question the temporal assumptions of modernity, and now it's time to step back and reincorporate an understanding of temporal processes as intrinsic to human life?

HAYLES: Ethington has an important article called "Placing the Past"[7] where he essentially argues that time, in itself, does not exist. This very partial approach is nevertheless interesting because it shows the extent to which a historian is willing to negate time as the primary parameter of

interest to history and go completely to a spatialization of events. My own opinion is that this is not a fruitful direction to pursue for very long. It may have an initial spark for history because, having been centrally concerned with time for so long, turning to spatialization may give historians new insight into their matters of concern. But time and space are always interrelated; you can't suppress one of these parameters for very long before that inquiry becomes tilted and partial, to the detriment of a full-bodied understanding. Spatial history is really interesting, but I am persuaded by geographers like Ruth Mostern and Doreen Massey that spatialization alone cannot tell the whole story.

In my talk I was arguing that it's difficult to encode movement and time in relational databases, while object-oriented databases offer more possibilities for that. Object-oriented databases are based on the idea of defining classes and subclasses in a hierarchical order. With class as the basic entity in an object-oriented database, time can be incorporated, because classes can be objects which already imply movement and time in their construction. In that sense, object-oriented databases may be a more time-oriented approach than relational databases. The basic philosophy of relational databases is that the world consists of atomized bits of information, and if one takes that approach, it's really hard to build time into the representation. The story is more complex than this, however, because technically there are ways to combine relational and object-oriented databases, and there are also software interfaces that allow a programmer to treat a relational database as if it were an object-oriented database. These complications notwithstanding, the general point is that time and space are deeply implicated in the technical representations of media as such, including the structure and functioning of data structures such as relational and object-oriented databases within networked and programmable machines.

WILEY: I want to come back to the question of experience. In your symposium presentation, at one point in a parenthetical comment, you said, "Setting aside a Bergsonian understanding of time as the domain of human experience … " Your talk bracketed that question and went on to focus on the ways in which different kinds of technical media spatialize time in different ways, closing off, or opening up new possibilities for representing temporal processes. I'd like to ask you how we go about developing a material understanding of experience itself? Perhaps this is what you were beginning to talk about when you mentioned your work on attention. I'm also thinking of Mark Hansen's work, presented at the symposium, in which he talked about the neurophysiology of sensation and the way in which sensation, as a process of "prehension," is embedded in changing technical environments and happens prior to human cognition and subject formation.[8] Another strand that might be important here would be your work on code, in which we begin to look at the co-constitutive nature of computational code and human genetic

code. These all seem to suggest an attention to physiology or to the body or perhaps to a different term which you have invoked in some work – embodiment – which I understand is more situated, particular, and less generalizable. Could you talk about what a materialist understanding of the body or embodiment requires us to attend to?

HAYLES: As far as the physiology of response is concerned, if we look at the literature on neurological response time, it's clear that human responses evolve along a very heterogeneous spectrum. The response time required for a neuron to fire, for example, is about 100 times faster than the time required for perception to register in the brain. The time required for perception to register in the brain is many orders of magnitude faster than a conscious conclusion that one might draw. Humans embody a very complex, heterogeneous, and fractured sense of time. Daniel Dennett, in *Consciousness Explained*, argues that this fracturing and heterogeneity of temporal responses is smoothed over by consciousness to give the impression that time proceeds for us, physically, as a more or less unbroken and even sequence of events we can consciously register and talk about, narrate, and so forth. But this is a complete illusion; it's a fairy tale that consciousness tells itself about what's actually happening. The work in a variety of fields, including neurology, psychology, cognitive science and other research areas, is converging to create a picture of the "new unconscious," as some researchers call it,[9] or the "adaptive unconscious" in Timothy Wilson's phrase.[10] This work makes clear that the cognitive role of consciousness is being supplemented at every moment and every instant by unconscious processes. One way to think about this is that consciousness represents a drastic narrowing and funneling of cognitive events and perceptions into a very narrow bandwidth. This narrowing is crucial to consciousness being able to create the impression of a uniform stream of events. The overflow, as it were, is represented within the unconscious. Compared to what consciousness can capture and represent, the overflow is much, much more abundant – too capacious to register in consciousness. Unconscious processes, however, are able to act on this overflow to set priorities, establish goals, and so forth, so that the full cognitive response goes way beyond conscious processes and gives a more accurate reflection of the fractured temporality through which humans experience the world. With this notion of how the body actually works, we get a picture of human embodiment as a fleshly distillation of time's heterogeneity.

What's under-developed and under-theorized in the contemporary environment is how a similar model might apply to objects. If we think of an object as something that is stable and moving through time as a spatially defined entity, there's a mismatch – a radical mismatch – between the complex temporality embodied by human physiology and the simple, uneventful temporality embodied by objects. But we know that this can't be correct; we know that objects in fact experience a

complex temporality as well. Gilbert Simondon has made this argument with respect to fairly simple technical ensembles,[11] but to me the best technical example of the embodiment of complex temporality by objects is the networked and programmable machine. There is very fast response time at the bit level and at the level of logic gates, but if one goes up the tower of languages to a complex program, the response time is much, much longer. So we have a technical object pervasive in our environment now that embodies complex temporality in a somewhat analogous fashion to the way that the body does. Put those two together and you get a vision of interaction that is taking place at multiple time scales between human responses and computer programs and at multiple sites within the human and machine, including conscious as well as unconscious responses on the part of the human partner, and invisible as well as visible processes within the computer. Since you're now trying to match two complex temporalities, the whole complex picture increases exponentially in complexity.

WILEY: Do we also need to consider the positioning of that complex interaction (between bodies and technical media) within the broader field of social practices and interactions? In other words, what scope of analysis is needed to understand the production of a human subject or a distributed subject that involves human–technical interaction? Should we be focusing on technical media themselves, as Kittler seems to claim? Do we need to look at the embodied human–technology interaction, as I understand you to be arguing? Or should we also be looking at larger social contexts in which both culturally specific notions of the body and culturally specific notions of technical media are also playing a role? To simplify, what should be our object of analysis if we seek to develop a holistic approach that takes material realities seriously but attends to the range of factors that are playing a role in the production of a subject?

HAYLES: Traditionally, the object of analysis for the humanities has been the human, but it seems to me that there's a very interesting area of inquiry now which is focused on objects – not the human – within the humanities. While objects have long been the focus for fields like engineering, the idea that an object would be of interest to analysis in the humanities is relatively new. When the humanities come to analyze objects, they bring a different perspective than an engineer might bring, for example. To me, it makes perfect sense to talk about the worldview of an RFID tag. What I mean by worldview in that context is that objects have sensors that are precisely defined; they have actuators; it is therefore possible to know in considerable detail how an object perceives the world and how an object is able to act upon the world. Taking this approach would involve certain technical specification and technical knowledge, but once one has a sense of the worldview of any given object, it is then possible to think about how that object interacts with human

worldviews. And of course we know worldviews are culturally and historically conditioned. For an object, that would also be true, but in addition, it is technically conditioned. To think about how the worldviews of the human and the object interact is a perspective that engineers would be unlikely to bring to the table, except perhaps in the narrow sense of marketing. So I see this as a really interesting and rich area of inquiry for the humanities. It poses certain challenges to our assumption of anthropocentric perspectives. Speculative realism is one emerging theoretical area asking these kinds of questions.[12] They put the issue squarely on the table: Is it possible to know a world devoid of humans and what is it possible to know about such a world? What is implied about even asking a question about knowing a world that is profoundly non-anthropomorphic? From my point of view, the really exciting prospect is putting the human back into a picture that doesn't start by assuming humans from the outset.

WILEY: This idea of the worldview of an object would seem to resonate with Kittler's focus on the ways in which technical media construct possibilities for interaction and so forth. So if I hear you correctly, it's worth spending some time in that mode and then thinking about networks of human and non-human actors in interaction?

HAYLES: Kittler starts from a more practical perspective than speculative realism, in the sense that he assumes we can indeed know the nature of the object, specifically media objects. Speculative realism, specifically Quentin Meillassoux in *After Finitude*, critiques what he calls correlationalism – that is, we only know the world *for us*, we don't know the world in itself. Scientists and engineers have long thought that we could know things about the world in itself, not only for us. Following this line of inquiry, if you then reintroduce human perception into that picture, you come out in a different place than if you would have begun by assuming anthropomorphism. And the place that you come out, to my mind, allows a richer understanding of what human–object interactions are really about.

WILEY: This line of conversation leads inevitably to the question of agency, and we'll try to deal with it quickly and then move on. I'm reminded of Kittler's provocative statement that "there may be media technologies without love, but there's no love without media technologies."[13] He's talking, in *Optical Media*, about the way in which human subjectivity is constructed historically as an interiority that develops in relation to the book, and the romantic novel in particular. He suggests that we need to look at agency both in relation to technical media and in historically specific ways. Similarly the notion of actor-network theory, or distributed cognition, or the broader post-human tendency you're talking about, which moves away from anthropocentric analyses, raise this question of agency. It seems that thinkers in the actor-network tradition want to locate agency in the network as kind of emergent property of

the interaction itself. Could you comment on that question of agency in general, but also in relation to the ethical questions that arise when we want to constitute a sort of agency capable of intervening in the politics of networks, of information, of media? In your work on the RFID chip and DNA databases, for example, and most recently in your commentary on the House of Lords report on surveillance,[14] you develop a strong ethical and political critique of the ways in which these technologies are being regulated or not regulated. How do we think about the production of agency in the ethical sense, in a context where agency itself has been problematized and is no longer a human autonomous action?

HAYLES: Returning to my critique of the way "assemblage" was used by some of the conference presenters, let us recall that in Deleuze and Guattari, "assemblage" is meant to subvert the notion of preexisting, intact human subjectivity. Maybe non-human isn't the correct word for this approach, but it is anti-subjectivity. It is meant to show that human action doesn't start with subjectivity, that subjectivity is a kind of end point – and perhaps a false end point – created by consciousness. Many diverse factors are impacting, or disassembling and reassembling, an always already contingent assemblage. The notion of the assemblage as a concept is therefore a strong critique of preexisting subjectivity. The way that I heard that term being used at the conference was something like this: "We have these intact subjectivities and now we add in some technical objects and now we get an assemblage." To my mind, this is a misuse of the idea of assemblage unless we want to say "assemblage" can mean anything, in which case it ceases to be a useful theoretical concept. In terms of assemblage and its relation to complex distributed agency, if we accept the idea that subjectivity is a late-comer to the party, and that preceding subjectivity are complex cognitive and physical forces at work within the human actor, then agency immediately becomes much more complex. This idea is of course scarcely new; Freud had already introduced the idea that human agency is much more complex than conscious decision-making would have it. What is new about current research on the unconscious[15] is that, in this view, the unconscious doesn't just deal with repressed or suppressed material. The unconscious is an ongoing, pervasive, cognitive faculty at work every minute of the day in every situation. So this view broadens, extends and really redefines the notion of what the unconscious is.

Now, there's no reason why agency has to be regarded as solely a function of consciousness. We may think consciousness is the sole repository of agency, but it's clear in this current research that unconscious decisions and priority setting and so forth also have agential force. Take, for example, the notion of priming. College students who are given word lists containing references to old people immediately afterwards walk more slowly, have spottier memory recall, and move with

less erect postures than usual. As social beings, we unconsciously moderate our behavior to suit the context, and so all kinds of social cues can affect our behavior below the level of consciousness. Freud's model of suppression/repression emerges from a view of the human in the relatively narrow contexts of family history and personal relationships; if we broaden the scope to consider more dispersed contexts, then the role of the unconscious expands accordingly. The new view reconstitutes agency and subjectivity as much more complex psychic and physical functions. Agency is not being denied but rather redefined as a distributive property sensitive to a variety of contexts that emerge from situated actions, rather than solely from conscious perceptions interacting with unconscious suppressions. Ethical action then broadens its scope to be much more than conscious decision-making in tension with unconscious suppression. Rather, ethics takes on social implications that emerge from complex contexts in which information is being processed both consciously and unconsciously to create a rich picture of embodied, emplaced and enacted interactions. To see how different this version of ethics is from dominant models, consider rational action theory, which places nearly all the emphasis on a rational actor consciously considering choices. In my view, this is a more adequate vision of how agency actually works in the world and why agency is such a complex issue. It simply cannot be encapsulated within considerations of consciousness.

WILEY: As you talk about other elements that would go into the constitution of agency, I'm reminded of two things. One is that in Deleuze and Guattari, in the original French, "assemblages" are *agencements*, which would more literally be translated as a kind of "agencing." Thus it seems that the concept of assemblage would be better understood as a process, rather than as a finished configuration of humans, objects, environments, and practices. It is the bringing into resonance, direction, coherence – not necessarily a logical consistency, but kind of a coherence of multiple heterogeneous elements – in such a way as to achieve an effect in the environment or in the assemblage itself. This would suggest a focus on process, a focus on heterogeneous elements, and a focus on the emergent qualities of agency. Another key element of Deleuze and Guattari's concept of assemblage is affect, which would seem to be a neglected component of much modern theory about agency. And there I'm reminded of Larry Grossberg's work on ethics and agency and the argument that in the 1980s, the Right was able to mobilize affect in various fields of popular culture in the United States in a way that produced agency – political, social, cultural agency, moving rightward, so to speak – without necessarily achieving a rational or logically consistent argument, about policy, about social norms, and so forth. I wonder if the notion of assemblage, as Deleuze and Guattari originally used it, has lost some of its conceptual potency in terms of

both the processual character of *agencement* and the attention to the affective dimension. I think you're talking about multiple other dimensions, not simply cognitive and affective, but would the concept of assemblage as used in Deleuze and Guattari better capture the understanding of agency that you are developing?

HAYLES: I'm glad you make the point that agency is already bound up with assemblage in Deleuze and Guattari. The critique that I would make of their work in this regard is their strong emphasis on desire as the motivating force that's driving the dissolutions and reconfigurations of assemblages. They, especially Guattari, are coming out of a psychoanalytic background, and it's understandable why they would give pride of place to desire, given that context. But, in fact, the forces driving the dissolution and reconfiguration of assemblages are much broader than desire. This is not to deny that desire plays a role, but there are all kinds of factors at work that could not adequately be captured by the notion of desire. In my view, they present an incomplete portrait of what those motive forces might be if subjectivity is not presumed and already written into the scenario. To take an example: in many species, including humans, the drive toward survival is extremely strong; you could code the drive to survive in terms of desire, but it's really about wanting to continue one's existence. That isn't given much attention in their work, no doubt because the notion of survival presumes that the creature has a sense of wanting to continue as a creaturely entity, whereas they imagine creatures as assemblages that are constantly in motion, so it is not clear what "existence" could mean in that context. Who, or more accurately what, continues to exist? Atoms? Molecules? Proteins? Cells? None of these individually could account for the drive to survive; it takes a sense of an intact organism wanting to continue and extend its existence. And we could mention other kinds of psychic forces as well.

Going back to agency and the dilution of Deleuze and Guattari's notion of the processual nature of assemblage and the role that agency might play: yes, by all means, agency is deeply tied in with perception, and since it is perceptual, it implies a strong temporal dimension. That relates back to our earlier discussion about the role of spatialization given the handiness and the power of GIS technology in particular. What I see as the challenge for contemporary theory in this respect is to find ways to incorporate processual perspectives or temporal perspectives into spatializations in such a way as to arrive at a fuller explanation of what causes historical events, ways in which agency is exercised within historical events, and so forth.

WILEY: Could this already be taking place in the marketing strategies of companies that offer mobile social networking and media-driven opportunities for consumption, for example, or in discussions, in military and governmental planning groups, of the use of real-time surveillance by intelligence services and so forth? Are they, perhaps, already modeling a

more complex, prosessual understanding of human behavior, risk, and so forth? Are humanists and social scientists late to address questions about something that's already being developed around us, or are you talking about something different?

HAYLES: I recently heard that Twitter, which is a temporal phenomenon, is now acquiring spatialization technologies. There was already this company, Foursquare, which allowed people to identify their location as a primary parameter of conversation. Now, as I understand it, Twitter is using a comparable technology to combine the temporal aspect with spatialization and localization, and that will all obviously be tied up with locative technologies through cell phones and other mobile devices equipped with GPS technologies. I'm sure that companies like Twitter are imagining this fusion of time and space. The answer to whether humanists and social scientists have something to add to this conversation seems to me unequivocally "Yes"! For corporations, conversations about combining temporal processes with locative technologies would necessarily take place in terms of corporate profit, acquisition of companies, patenting of the technologies, priority of their product, and so forth. What the social, cultural and ethical implications of that might be are not apt to be first on the minds of those companies. So I think that humanists and social scientists definitely have something to contribute. But are they late? Yes, they're late, because theory in this respect is lagging behind the technology and what technology companies are already doing. The technology is changing so quickly, it is almost impossible not to be in a catch-up position.

WILEY: We've been talking a bit about spatialization, and recently about the role of mobile locative technologies in particular. In that context, I want to ask you about the "mobilities turn" in social theory, if you acknowledge that there has been an awakening to mobility in some recent social analysis.[16] This mobilities turn may have been catalyzed, initially, by the proliferation of mobile technologies such as cell phones and GPS devices and so forth. But I think attention to mobile technologies, mobile devices, mobile media, has evolved more recently to a more radical critique of what Tim Cresswell calls the "sedentarist" assumptions of theory.[17] So in addition to the need to think about the ways in which technical media spatialize time, perhaps we also need to incorporate mobility, which of course entails both temporal and spatial changes. One thing I find interesting about the mobilities turn is the argument that much or our social theory is grounded in the conflation of culture and place, so that people are seen as belonging to places which have culture. The traditional anthropological mode is to go to those places, study them, and then come back to talk about their culture. But the mobilities turn suggests that place itself is a much more dynamically constructed phenomenon – that it might be more accurate to think of *placings* rather than sedentary, or static, places. So I want to ask how,

or if, this move toward attention to mobility and mobile technologies has shaped your work. More broadly, would you agree that our understandings of the logics of spatialization and temporalization need to be rethought in light of this questioning of the older anthropological sedentarist understanding of place?

HAYLES: I have recently been very interested in these questions but I'd like to broaden the perspective beyond mobile technologies as such. As you no doubt know, in 1977 Yi-Fu Tuan published *Space and Place*[18] and catalyzed the development of what is called humanistic geography. Humanistic geography does assume priority of place over space in general and tends to privilege place as the rooted expression of human culture and human subjectivity, whereas space is seen as more abstract and not as rooted in the individual experience. That approach has been critiqued within geography; one of the limitations of that approach is that it's hard to find any place on Earth now that hasn't been affected by globalization. If you begin by privileging a rootedness in place, you really have no way to take globalization into account except as a late add-on to the picture. Doreen Massey in her article "A Global Sense of Place"[19] argues that the place approach is fatally flawed, and that the beginning point for theorization and empirical research should be the notion of interrelationality. Even though people are rooted in specific places, their emerging stories come about through interactions with regional and global economies, concerns, decisions, policies, and so forth. If you begin with the notion of interrelationality, you have a way to accommodate rootedness in place, while also recognizing that place doesn't assume the sedentary and nostalgic value of rootedness; rather, this approach sees rootedness as always in dynamic interplay with larger regional, national, and international influences.

Allow me to add a cautionary note about the sedentary bias of theory. I wouldn't want us to throw out of consideration the fact that mobile technologies all rely on located technical infrastructure. Whether that technical infrastructure is a repeating tower for a cell phone, whether it's a satellite transmission somewhere that's going down into a cloud-computing type of facility or whatever, mobile phones only work because there is located infrastructure. If we focus only on the fact that we can move GPS devices and mobile telephones around, we're ignoring half of the picture that is equally as important as the mobile half. Whether you can get cell phone reception, how fast your signal can be processed, whether a call gets dropped – all that is dependent on located, that is to say relatively sedentary – infrastructure. It seems to me that the issue here should be the interrelationship of mobile technology with located infrastructure, and that's why I'm a little resistant to the notion of sedentarian interest. Yes, we need to take mobility into account, but it's not as though these are free-standing devices. These are all dependent on some larger kind of infrastructure.

WILEY: So we would need a geography of infrastructure, which might have its own temporality, but a slower temporality, presumably, than the user, who's carrying around the phone, and mobility takes place within these fields that are constructed by those fixed infrastructures.

HAYLES: Adding in the infrastructure gives you deeper insight into the ways in which political, and economic, and public policy factors affect the use of mobile technologies. Where the infrastructure is located, within what territorial boundaries, who owns it, who operates it – those crucial considerations enable us to see that the political considerations go way beyond the company manufacturing individual cell phones. It goes to larger political and corporate alliances between those who own and control the infrastructure and those who are developing the mobile technologies. Some recent developments within the telecommunications industry having to do with net neutrality have highlighted the importance of those alliances and their effects on our lives.

WILEY: Nevertheless, it would seem that the ability to carry around what is essentially a computer with a touch-screen visual interface, a computer that probably surpasses the computing power of most desktops of only ten years ago, is changing the environment in which we act and think and interact with others. So the notion of distributed cognition might also need to be mobilized. That is, if much work in the digital humanities has focused on human–computer interaction, and if observations about that interaction have been predicated largely on the specific technology of the desktop (on the immobile computer), doesn't the mobility of a smartphone, tablet, or laptop now introduce new questions into our work? Does the context of the politics and economics of infrastructure and information management and the broader shift in the environment free up computational power from the fixed desktop computer? Does that raise new questions for notions of distributed cognition or the notion of complex co-constitutive agency that we were discussing earlier?

HAYLES: Absolutely it does, and one way to think about this is that human cognition now, in developed countries, rarely walks around unaided. It's not only a matter of sitting in front of the computer as you are suggesting; it's a matter of bringing the computational device with you into all kinds of different situations so that the human–computer interaction now becomes distributed, pervasive and environmentally mobile. Obviously, that is going to influence the way we think about human agency. The direction in which mobile technologies are taking us makes distributed agency and distributed cognition even more important and pervasive.

WILEY: … and perhaps more distributed as well …

HAYLES: Yes – more distributed and more pervasive.

WILEY: And of course, cell phones and smartphones are just the interface – the visible end-user component of a much larger network … and the

component that we tend to experience directly and think about most consciously. But some of your work points out that there are many other computing devices in our environment, at the nanoscale or at the scale of an RFID chip, that are beyond conscious perception of most inhabitants of the environment. Cognition, agency, decision-making and information may be pervasive and distributed across the environment, but nevertheless, our role as a co-constitutive human agent in that environment is very different depending on our social location in the larger fields of infrastructure and information flow.

HAYLES: One of the implications of that is the extent to which machine–machine communication is an increasingly important part of the picture. As human agents, we naturally tend to foreground our own activities and frame our questions and our research in terms of those activities, but in fact, human–human communication is becoming a smaller and smaller bandwidth compared to the total machine–machine communication. There are all these invisible information flows surging around us of which we're unconscious and unaware but that are nevertheless becoming increasingly important in the technical infrastructural and the larger picture of what's going on.

WILEY: I have two final related questions which are not small questions but which do follow from our current topic. First, what sorts of interdisciplinary collaborations or alliances do we need to be working on in order to be able to grasp some of these developments? And second, what are some ways in which we might need to rethink methods of inquiry? Is it important now for humanists and social theorists to find ways to work more closely with designers, engineers, and policy makers, in the context of the kinds of technical developments that we've been talking about?

HAYLES: This is a question I've been thinking about a lot, specifically in terms of my home discipline of literary studies. These questions pose specific challenges for the humanities, which are traditionally print-based; this would include not only literary studies but narrative history, philosophy, etc. A huge question looming now is how the humanities are going to cope as the age of print is passing and being replaced by a more diverse media landscape. It does seem to me terribly important that traditionally print-based humanists find ways to reconceptualize their research, their practices, and so forth to take into account this transformed social reality. A field like communication studies, which bridges the humanities and social sciences in many respects, may find these questions less fraught because communication studies has always been concerned with arrays of media and locates itself within those arrays. But for the print-based humanities, this is nothing less than a crisis of identity. For these disciplines, and specifically for literary studies, a promising approach is comparative media studies. For literary studies, this would include manuscript culture, print culture, and digital culture; it

would also change the emphasis from a fairly restrictive range of strategies called "reading" to a broader range of strategies that would be able to respond to digital technologies in particular. Here I'm thinking of what I call "hyper reading" and also "machine reading" – strategies that differ profoundly from the privileged icon of close reading but that would fit easily into a comparative media studies perspective. An interesting question is how such a reconfigured literature department would differ from a communication studies department; maybe they should join forces. In my view, such actions are best decided locally by individual department institutions. The one thing I'm sure of is that an exclusive focus on print is no longer a viable academic research or curricular strategy. Changes must be made in order to bring the digital into the picture. Does this mean increased collaborations with designers and engineers? I would say obviously it does, because as soon as you bring in digital technologies, there are all kinds of questions that humanists haven't traditionally considered and which become crucial to research projects. Comparative media studies implies not only disciplinary transformation but also a much broader reconfiguration of the academic landscape. In fact, Tara McPherson at the University of Southern California does not hesitate to say this really means a reconfiguration of the way the academy does business.[20]

WILEY: It would seem that one of the deep tensions there is the critical, reflective, analytical impulse of the humanities and social sciences in juxtaposition with the constructive, creative, impulse in engineering and design. In collaborative projects, it seems that one of the tensions would occur when humanists and social scientists attempt to move from the critical, analytical posture to a more experimental or creative posture … or perhaps when engineers and designers and policy makers are asked to pause and take the time to reflect on the ethical and cultural and social implications of the objects they're creating in conversation with humanists and social scientists. Is this a direction we would need to go – toward a more experimental, constructive, or productive kind of approach, as opposed to a hermeneutical methodology of critical reading?

HAYLES: That is a central question. I think there has been something deeply hypocritical about the culture of critique that continues to be dominant within the humanities. What's hypocritical about it is that the posture of critique has now become stereotypical and mainstream. And yet the posture of critique assumes that whoever is making the critique is executing a dangerous and subversive action. Within the humanistic discipline, however, it isn't subversive at all. It's absolutely mainstream. Nor is it resistant, for it is promulgating the dominant ideology of the discipline to those who attend to it. It might be resistant as far as the general society goes, but they are frequently not listening. It's time that we rethink the posture of critique and recognize these contradictions. I am not suggesting that we abandon critique but rather that we combine

it with constructive action that uses it as a starting point rather than a final destination. As soon as we make a critique of the culture of critique, we must recognize that we in the humanities are absolutely in league with the forces of capitalism and corporate enterprises, because humanities departments in every university in the country are largely subsidized by work that goes on in the engineering school, the medical school and the business school. On a daily basis, our research and our salaries are only possible because the university is receiving huge subsidies from these other, less critique-oriented cultures. Recognizing that as an everyday fact of life in the university automatically draws into question the culture of critique and how it positions itself in terms of its own involvement with capitalistic enterprises. Reasoning like this can lead us out of the dead end that the humanities has gotten into with the culture of critique, open up other possible responses such as productive and creative collaborations with our colleagues within and without the university, and drive us to participate from the inside in making a more just and equitable society through effective action in the world. So yes, I would really welcome this kind of rethinking and this truly subversive activity, which aims to create as well as to critique and to engage productively with profit-oriented enterprises as well as with art and nonprofit institutions.

WILEY: I'm going to ask one final follow-up question, to bring the social scientists into the picture here. We talked about humanities and, on the other hand, engineering and design, as examples of cross-disciplinary collaborations. One of the tensions between humanism and social science, I think, is the question of hermeneutics and interpretivism as a method versus the allure of empirical work. Empiricism can of course be very positivist in some social science methods, but there are also versions of cultural studies, anthropology, sociology, and psychology that have a critical empirical focus. What do you see as the challenges for interdisciplinary collaborations between literary studies, rhetoric, and composition (and textual analyses within communication), on the one hand, and the attention to contexts, to human subjects, to historical contingencies and so forth that social science or cultural studies might bring to that conversation?

HAYLES: From a humanist point of view, one of the risks of undertaking empirical work is that it threatens to disenfranchise the humanities because the humanities have traditionally not been invested in empirical work or trained to understand it. There is considerable fear among humanists that turning to empirical work will have the effect of trumping interpretive work, so that humanists would be shooting themselves in the foot, so to speak, if they go that route. I understand that fear, and it is the more cogent because for some kinds of empirical work, the technical expertise required for intelligent critique would itself takes years of training and experience to acquire, which

makes it simply not an option for busy professionals in the humanities. We are, for example, not trained as statisticians, a field in which quite complex formulations defeat casual attempts to gain expertise. These difficulties notwithstanding, there are a number of solutions to this kind of problem. One is collaboration with social scientists. Humanists can bring interpretive skills in contexts that are enriched by empirical research as well. The barriers to deep communication are considerable, but nevertheless can be overcome with good faith and trust on both sides. There are also ways in which empirically inflected work is appearing within the humanities. For example, in the digital humanities, the field of machine reading is becoming increasingly important. What humanists are discovering is that the interpretive work based on an individual encountering a text, reading it deeply, and so forth, can in fact be enhanced and made even more cogent by machine analysis of rhetorical, grammatical, and semantic patterns. What machine analysis contributes to understanding complex cultural texts is scope and subtlety of detecting patterns across large corpora that exceed the ability of any individual reader to encompass. So, I do think there are ways in which the humanities can engage in empirical work without forsaking its interpretive vocation and without automatically putting itself in a one-down position. As I argue in my forthcoming book *How We Think: Transforming Power and Digital Technologies*, if the passing of the age of print in one sense constitutes a crisis for print-based humanities, in another sense it represents the dawning of a new era of productive collaborations with empirical research, with colleagues in the quantitative and qualitative social sciences, with engineers and designers, and in general with all of the increasingly powerful ways in which machine cognition is executed within networked and programmable devices.

WILEY: Thank you very much.

HAYLES: Thank you.

Notes

1 Hayles, N. Katherine (1992). The Materiality of Informatics. *Issues in Integrative Studies 10*: 121–144.

2 See these authors' chapters in this volume.

3 Media are practices that use strategies of spatialization to enable one to manipulate the order of things that progress in time. Such means of time-axis manipulation are only possible when the things … are not seen as singular events but reproducible data.

(Sybille Kramer, The Cultural Techniques of Time Axis Manipulation: On Friedrich Kittler's Concept of Media. *Theory, Culture, and Society 23*(7–8): 93–109)

4 Stiegler, Bernard (1998). *Technics and Time: The Fault of Epimetheus*. Stanford, CA: Stanford University Press.
5 Richard White, Director of the Spatial History Lab at Stanford University. See White, Richard (2010). What Is Spatial History? Available: www.stanford.edu/group/spatialhistory/cgi-bin/site/pub.php?id=29
6 Mostern, Ruth and I. Johnson (2008). From Named Place to Naming Event: Creating Gazetteers for History. *International Journal of Geographical Information Science* 22(10): 1091–1108.
7 Ethington, Philip J. (2007). Placing the Past: "Groundwork" for a Spatial Theory of History. *Rethinking History 11* (4): 465–494.
8 See, also, his chapter in this volume.
9 See, for example, Hassin, Ran R.; Uleman, James S.; and Bargh, John A. (Eds.) (2006). *The New Unconscious*. Oxford University Press.
10 Wilson, Timothy D. (2004). *Strangers to Ourselves: Discovering the Adaptive Unconscious*. Belknap Press of Harvard University Press.
11 Simondon, Gilbert (2001 [1958]). Du mode d'existence des objets techniques. Paris, Aubier. Original publication Paris: Méot, 1958.
12 See, for example, Meillassoux, Quentin (2010). *After Finitude: An Essay on the Necessity of Contingency*. London: Continuum; Brassier, Ray (2010). *Nihil Unbound: Enlightenment and Extinction*. London: Palgrave Macmillan; Harman, Graham (n.d.). *Towards Speculative Realism: Essays and Lectures*, n. p. O Books, John Hunt Publishers.
13 Kittler, Friedrich (2010). *Optical Media*, p. 106. Translated by Anthony Enns. Polity Press. Originally published 2002.
14 Hayes, N. Katherine (2009). Waking up to the Surveillance Society. *Surveillance & Society* 6(3): 313–316. Available: http://www.surveillance-and-society.org
15 See Hassin, Uleman, and Bargh (Eds.), op. cit.
16 See, for example, Sheller, M. and Urry, John (2006). The New Mobilities Paradigm. *Environment and Planning A 38*: 207–226.
17 Cresswell, T. (2002). Introduction: Theorizing Place. In Verstraet, G. and Cresswell, T. (Eds.), *Mobilizing Place, Placing Mobility*, pp. 11–32. Amsterdam: Rodopi.
18 Tuan, Yi-Fu (2001). *Space and Place: The Perspective of Experience*. Minneapolis: University of Minnesota Press. Originally published 1977.
19 Massey, Doreen (1994). A Global Sense of Place. In Massey (Ed.), *Space, Place and Gender*, pp. 146–156. Minneapolis, MN: University of Minnesota Press.
20 See Chapter 2 of N. Katherine Hayles, *How We Think: Transforming Power and Digital Technologies*. University of Chicago Press (forthcoming).

Chapter 2

Becoming mollusk

A conversation with John Durham Peters about media, materiality, and matters of history

Conducted by Jeremy Packer on September 15, 2010 in Iowa City, Iowa

JEREMY PACKER: There is a passage on the last page of *Speaking into the Air* which claims "no profession of love is as convincing as a lifetime of fidelity."[1] You also state that "touch is no cure for communication trouble: it is just more primal but equally intractable." Both seem to imply a means of connecting, perhaps a material means, that may or may not imply communication. I'm unsure of how to read these last few pages. Does fidelity function as a statement and thus act as a more powerful form of proclamation or are touch and love potentially prediscursive, prelinguistic, or precommunicative? Fidelity would then not need to be a statement of love, but an act of love, which actually would be significantly different than a linguistic phrasing.

JOHN DURHAM PETERS: Fidelity is like a speech act. It's a performative that is only refuted by infidelity. This means that such deeds, if sustained, remain true. The conclusion in *Speaking into the Air* is an endorsement of the wild act of faith that is to act as if. This is one reason why William James, the philosopher of acting as if, plays such an important role there. The book ends with a defense of keeping the act going and of the insuperability of touch. In terms of human evolutionary history, language is not very old, and those who study the rise of language suggest that it, along with so-called "behavioral modernity," is about 50,000 years old. On the other hand, pair-bonding and the privatization of sex seem to be almost 2 million years old. This means that people have been cooperating intimately for most of their history without language, and that touch, among other nonverbal forms, has this deep, deep quality to it. The modern verbal layer sits on top of the ancient nonverbal layer. There is no community without touch; ultimately, everybody you really care about you will touch in one way or another.

PACKER: I appreciate that clarification. This is to say that acts cannot merely or always be read as a sign of something else. There's something significant about that distinction, right?

PETERS: Yeah. Words and flesh are not the same thing. That's why I'm so interested in witnessing because with witnessing you have a form of

perception which is legally or ethically binding and it's not merely representation. Both of us are interested in trying to think beyond the "mereness" of communication. Sometimes you have to be there. Bodies can touch but minds cannot and that's the fundamental dilemma of communication. Crazy. You can hold an object but you can't hold a subject.

PACKER: Another consideration that comes out in *Speaking into the Air*, and to some extent in other work of yours, is the finitude of our materiality or our material existence. I don't want to call it a fatalism, but there's something about this finality that maybe makes life more precious. I wonder if this then becomes the grounding point for a materialist sensibility.

PETERS: Yes, that we exist at all should give rise to endless wonderment. Friedrich Nietzsche loves to talk about *amor fati* or the "love of fate." Harold Bloom somewhere notes that our love lives seem to start in contingency but take on the air of necessity. Looking backward small choices that led up to a meeting seem charged with destiny. The historian's wisdom is also retroactive, showing how things went the way they did though they could have gone otherwise. But retrospective sensemaking is what we all do in terms of making sense of finitude.

PACKER: Like what Heidegger means with "thrownness."

PETERS: Yes, we are ejected from the womb. We didn't choose our condition, our names, our parents, our language, our mother tongue, our skin, and our gender. Anthony Giddens among others likes to celebrate the plasticity of sexuality, as he calls it, as part of the more general plasticity of supposed postmodern life. So you're right to see *Speaking into the Air* as pretty old fashioned in a sort of way. When it was published it was the height of a certain kind of internet utopianism, the notion that we could leave our bodies behind and fly through cyberspace. Hans Moravec, for instance, wanted to upload his consciousness into the internet in the 1990s. And one of his fantasies was virtual reality, which would include so-called teledildonics – as he called it – essentially fully functional pornographic or sexual virtual reality. And I think *Speaking into the Air* is trying to defend the horizon of the other's touch or perhaps even chastity. Obviously, the book praises polymorphous eroticism in terms of passion and attraction, but in terms of practice, in terms of what you do with your body, your finitude, it insists on intimacy or fragility, shared with none or few. In this it is rather Platonic in a couple senses of the term, giving a practical limit to the praise of dissemination that otherwise pervades the book. The ancient Greeks appear to have called the genitals "physis" which is of course the Greek word for nature, where we get the word physics from. What you do with your nature, with your genitals, is actually a very profound kind of thing. Touch is not something you can generalize in the way that you can reproduce speech or hearing or vision with audiovisual media. Someday

someone will perhaps figure out how to record and transmit the flesh but for now it is a bulwark of singularity against easy dissemination.

PACKER: Two things that you said may be directly related. We're thrown into this world, but we often leave it kicking and screaming.

PETERS: We enter it kicking and screaming! (laughs)

PACKER: This desire to upload into the virtual world, to gain infinitude, as with the notion of singularity, where all humans and machines will merge into one, makes sense from a secular humanist sensibility, less so from a Christian or any sort of sensibility that has an afterlife built into it. So I'm wondering if at some level we have competing afterlives. And I don't want to situate them both as forms of kicking and screaming because it's actually a way of going with much more grace and hope. Do you see some sort of relationship here between these two responses? The desire for singularity, the desire to upload, are a desire to overcome finitude. Where there's a belief in the afterlife you can relax since you'll get your infinitude elsewhere. Right?

PETERS: Yes, but I'm not even sure that an afterlife necessarily has to be one of infinitude. What's interesting about the sort of materialist streak within Mormon metaphysics is that God is finite also. One reason why William James is always so important for Mormon theologians is because at the end of his pragmatism lectures, he sees a god who is finite and therefore not able to fully master the chaos, trouble, or suffering of the universe either. A finitist conception of God provides an answer to the question of evil, the question of why doesn't God intervene, why doesn't God fix everything? Well, he's limited. And he's probably, in Mormon theology, limited by the autonomy of other intelligences, and subject (if you can say that) to many of the same communication issues any intelligent being faces. So I'm not sure that it's a matter of criticizing cyber infinitude now because I'll get mine later; rather, the singularity of every relation, choice, and action might be the eternal condition for intelligent beings.

PACKER: I'm going to continue this line of questioning regarding Mormonism. I was looking at the article you wrote in 1993 titled "Reflections on Mormon Materialism."[2] In your description of materialism, you explain that for Mormons, and I would suggest Calvinists as well, financial and material success become a solid indicator that you are in fact righteous and vice versa. As you explain, materialism then primarily becomes an indicator of something else. Its function is to communicate…again, your righteousness, etc. Your response, which I'm afraid I'm oversimplifying, it is to take solace and joy in "a genuine appreciation, love, and gratitude for worldly goods, and to turn to finite material things rather than flee from them." I see this as an attempt to move away from the communicative value of the material as again a sign for something else. What, again, is this "something else," this non-signifying infrastructure of communication?

PETERS: Walter Benjamin liked to quote the mystical text the *Zohar* that in the messianic world there would be no images. Translating that, I would say in a just society or a messianic society of equality, goods would not signify social difference. In the article, I argued that materialism has become essentially a class system in which people better one another by their goods. I built on Raymond Williams's argument that advertising is not genuinely materialist because it's based on fantasy and appeals to non-utilities. Consumption in our world is always inevitably infested by pride or social comparison. If you were able to banish that element of inequality from material goods, then you would have a genuine materialism, in which tomatoes and grass and flowers and rice, carpentry, and carpets, and pianos would be valued as things which bring beauty, joy, and use. Within Mormonism, there is a kind of social communalist, utopian longing for the ideal society called Zion. Zion is a society in which all goods would be held in common – not that everybody would be equally poor, but that everybody would be equally rich. And that wants, not just needs, would be fulfilled: if someone really wanted a piano, or a basketball court, or a swimming pool, these things would be things that everybody could have at their use. It is the infestation of social inequality that irks me in all of this. Consumerism is a kind of perverse immaterialism, because it's all about signification.

PACKER: Within this difference between use value and exchange value, exchange value is to some degree predicated upon a host of signifying systems, an advertising system and any number of culturally relevant forms of signifying differences used to establish value. The goods of which you speak must have a value that comes from somewhere. Where does it come from? Are these culturally specific? Are these universal? So in other words, without granting some transcendent value to music or swimming, etc., and extending beyond basic human material needs, which of these material goods are established as desirable?

PETERS: Granting that "human nature" is a very troubled concept, I do think that humans are conditioned by our organic infrastructure. I think that's the point of Hannah Arendt, who could have called her book "the conditioned human" rather than "the human condition," and I don't mean this in the behaviorist sense of operant conditioning in terms of reward and punishment, but just that material constraints shape our bodies and forms and possibility of life. I just gave a lecture to the undergrads in which I spent about 5 minutes raving about chlorophyll and I think they all thought I was crazy, but 2.5 billion years ago the coolest thing ever took place: plants came along, figured out how to store energy so to take the sun's fire and heat and convert it into chemical form that would last, producing oxygen along the way. And they produced the right amount of oxygen, now about 21%. Now if the atmospheric level, according to lab experiments, drops below 12% oxygen, you can't start a fire, and if it goes above 25% you can't stop a fire. So here's a classic

example of a condition. Oxygen allows speech, it allows metabolism, and it feeds our mitochondria. Our brains would be dead in 5 min without the stuff. Our brains are quite literally on fire. Everything's burning, said Buddha. And he's actually quite right from a biological perspective. Everything alive is burning, and it's because of plants that produce oxygen. So there in the botanical infrastructure is a profound "ground" as Heidegger, perhaps too portentously, would say in our lives. I guess I'm sort of an Aristotelian in thinking that humans are zoa, living creatures that are born, die, metabolize, and reproduce, but whose lives are mixed with speech, poetics, politics, logic, ethics, and metaphysics and all those cool things that Aristotle studied.

PACKER: Something I'm hearing here that I'm going to try to work in as a transition point between our discussions here on materiality and two thinkers whose work on communication can be thought about in terms of a materialist approach are James Carey and Friedrich Kittler. And the transitional crux here is *Mathematics and Music*, Kittler's recent work that has yet to be translated into English. One of the last talks I think Carey gave pointed towards his growing interest in early forms of chant in the Christian tradition which were also tied to mathematics and memory. It was later published.[3]

PETERS: Yeah, you wouldn't know from the title that it includes three brilliant pages on music.

PACKER: It's a little misleading, right? I think they were trying to shoot for the top with the title…

PETERS: Imagine that!

PACKER: We've never done that (laughs). You bring Carey and Kittler together in one of your essays, "Strange Sympathies: Horizons of Media Theory in American and Germany."[4] The one statement you make about similarities between the two that stands out to me is that "both have a high tolerance for visions of technological determinism and put media in the history-moving role that Marxists used to assign to the means of production." I'm wondering if you could talk about this a little and I'm thinking about your own leniency regarding technological determinism, if we can call it leniency.

PETERS: To simplify it, I think the debate about technological determinism is caught on a false dichotomy. It's either structure or agency. I've been doing some research on this and discovered that technological determinism as a term was created at Columbia University in the 1920s. It emerges within debates about the economic interpretation of history with figures such as Charles Beard and Frederick Jackson Turner, earlier, who were arguing for economic forces as determining presidential decision-making, transformations in American history, or the frontier. And then, the person who seems to really launch it is Robert MacIver, a Scottish-American sociologist at Columbia who is more famous for having hired two other Roberts: Robert Lynd and Robert Merton, but was a famous sociological theorist

of the day, and he uses the term *technological determinism* as a counterpart to *economic determinism*. In this story, Marx is the great economic determinist, and Thorstein Veblen is the great technological determinist which was as surprising to me as I see that it is to you. Veblen thinks of technology in terms of craft, habituation, workmanship – not machines driving history as later people see it, so obviously the term meant something a bit different at first. It seems to me, I haven't really worked this out yet, but a lot of our current sense comes in the 1970s, in debates on the British left, Williams and E.P. Thompson, against more economist or structuralist interpretations of social change. Ever since, when we study technology, you either gotta have the people or structures. In a way, it all reproduces the late nineteenth-century debate of free will versus infinitely retraceable causation. And the problem is that later twentieth-century debates around technological determinism didn't absorb the scientific innovations that destroyed the nineteenth-century debate such as statistical analysis, quantum physics, understandings of path dependence in economics, and chaos theory. Though there are still some rhetorically opportunist debunkers out there such as Richard Dawkins, no one subscribes to the dream of total causal explanation that you can find in someone like Laplace, the French physicist, who says in 1814, "if you show me the location of every molecule in the universe and its velocity and direction, I can read everything that has happened and predict everything that will happen." That's the kind of universe people like William James struggled with because if that's true where's the room for moral ethical artistic political choice? But, his fellow pragmatist Charles Sanders Peirce emphasized the "sporting" quality of evolution, a wonderful word that suggests that playfulness is part of how the cosmos works. Weather, as Louis Menand's *Metaphysical Club* nicely shows, was one way that late nineteenth-century thinkers grappled with chance. We now know the importance of initial conditions – you know, the sneeze that occasionally causes the typhoon. Small causes, big effects. In twentieth-century physics, there's no perfect equality between cause and effect, though the quest for causality remains, as Max Planck said, a useful "heuristic." For someone like Kant, failure of causal explanation was a huge crisis. If causation collapses, there's no intelligible order in the universe, and science, philosophy, and moral choice are impossible. There's been a lot of rethinking since about more interesting ways to think about chance, network effects, overdetermination, synergies, and positive feedback. Why let nineteenth-century worries prevent us from considering a central human concern, the meaning of techniques?

PACKER: Okay.

PETERS: We're conditioned by oxygen, we're conditioned by sexual pair-bonding, we're conditioned by digits. We're conditioned by sounds and images and pictures, by the means of transportation, even by air conditioning. Our infrastructure is so rich in so many ways.

PACKER: Yeah, and I wonder in some ways if the knee jerk response when you hear that "X" story of technology is just a technological determinist explanation is a way of not having to deal with the scariness that in fact much of human life is determined.

PETERS: Yeah. I think that it's a form of intellectual intimidation. Geoffrey Winthrop-Young makes the wisecrack that calling someone a technological determinist is like saying that they strangle puppies in their basement. Like positivism, it is a term only used as a form of abuse. Nobody claims to be a technological determinist. But 20 years ago in a department debate, Sam Becker, my dear mentor, impishly said, Well, someone's gotta be a positivist to make it a real debate. In a similar spirit, I'll be a technological determinist. Someone's gotta do it. There are no dead puppies in my basement.

PACKER: I want to go back now and ask what materialist preferences or descriptions of behaviors you see in Carey and Kittler, especially in Carey, since Kittler's materialist leanings are more straightforward.

PETERS: As you know very well, Jim was caught in these horrendous debates in the Institute[5] in which he was accused of being the leader of so-called idealist cultural studies. Here too is a kind of rhetorical blackmail in being more materialist than thou. Materialism has always had this reputation from Democritus on as being the "tough guy" philosophy. William James calls it "tough mindedness." There's always sort of one-upmanship to claim to be a materialist because idealists are soft or tender-minded as James called them, believing in these nonvisible entities. There is a kind of bullying that goes along with claiming to be a materialist. I love Lenin's famous line that "intelligent idealism is closer to intelligent materialism than unintelligent materialism." Jim's idealism was intelligent, as in his essay on the telegraph[6] which you and I have both studied carefully. But so was his materialism, which always came out to me in his analysis of the university, with his brilliant point that political correctness was the triumph of the medical corps on campus. He was also always a really concrete demographer and sociologist, and once provided the best instant analysis of the Iowa City labor market I've ever heard.

PACKER: Yeah, okay. It's an interesting claim and not one that I would disagree with, but in some ways it may seem counterintuitive as Carey has often been seen as the champion of a ritual or cultural model of communications scholarship in contradistinction to a positivism which claims a unique access to our material world.

PETERS: It is good to remember that his name was James William Carey; sometimes, I think he should have been named William James Carey, despite his professed love for Dewey. James, in his lectures on pragmatism, does a really nifty maneuver to wiggle out between idealism and materialism. Instead of choosing one or the other, he splits the difference. He says that idealism is loved because it seems to nurture everything that we really care about – hope, choice, ethics, beauty. Materialism

seems pretty crass because it's the so-called "mud philosophy." But James then flips the two, saying it's the idealists that are ghastly and gruesome because they end up justifying killing and suffering because their universe in the end is all one big happy whole in which a few dead people are just the price we pay for greater glory. Then follows a really moving passage in which he says something like "anyone who's looked upon the body of a dead child or parent knows that this too is one of the forms that matter could take." Anyone who's loved someone else knows that the beloved is a material being with insistent material needs. We humans are also things. We have needs for contact, food, shelter; we have weight, gravity, get sick, all of this stuff. We are material beings. James' argument is to be the genuine humanist you have to be a materialist and recognize that matter itself is wonderfully refined. Carey manages a similar balancing act.

PACKER: This reminds me of something else Carey said in one of his interviews,[7] which was that one of the limits of the left was that while they could do a splendid job in imagining a world of social justice, they don't do such a good job of telling us how to bury our dead and how to commemorate them. Something else needs to fill that need which had to come through ritual, for him religious ritual.

PETERS: Religious ritual can be fiercely material! Many years ago at a conference in Boulder, Colorado in a response to a paper by Nicholas Garnham I praised his point that the human condition is tragic and Douglas Kellner, the Marxist theorist, countered with the standard line that tragedy is always a genre which is deployed in defense of things as they are because it takes suffering as a given rather than something that's alterable. And I'm all for care and social justice and good social change (not social change as such) but I don't think suffering as such can be fully eradicated. And if we could, would we want to? What would human beings be without suffering? How many joys would vanish if pain did? Augustine, the great theorist of pleasure and pain, like Freud later, makes the point that people like to eat really salty things to get thirsty to then go and drink. (Laughs)

PACKER: Popcorn, then beer!

PETERS: In terms of the positivist social science that Jim was always fighting, I think you can make an argument that that is profoundly idealist. If you look at something like attitudes which were long at the core of quantitative social research, what the heck is an attitude? It's not a material thing.

PACKER: The first moment is to conceptualize.

PETERS: Exactly. It's the same displacing of the real with the ideal on the other flank Jim fought. The left has a grand vision of human equality and justice but does that mean you're gonna behave in faculty meetings and treat people right? And I'm not saying that bad behavior is a monopoly of the left. It certainly isn't by any means – just look around our political environment at the moment.

PACKER: Sure. I have another question regarding Kittler and I'd sort of hinted at this earlier. I'm much attracted to Kittler's Foucauldian take on communication technologies and media as producing the brute facticity of discourse. Particular media or discourse networks allow certain statements, whether they be data, sounds, images, language, etc., to literally be made or not made. I think that's probably the most profound extension of Foucauldian thought that I've seen in terms of communication and media scholarship. I'm also quite happy with his McLuhanism, with his uptake of media as extensions of man where the real force is in how media alter the pace and scale of society. That also seems to be a very materialist sort of concern. But when it comes to Kittler's Lacanianism I start to have some trouble. I don't see why he is necessary. I'm wondering if you can give me a defense of why Lacan is necessary for Kittler. I don't want to presume you're in favor of a Kittlerian media studies. But if you were to defend it, is Lacan necessary or not?

PETERS: Kittler seems to have abandoned Lacan in the structuring role that he played in *Gramophone, Film, Typewriter*. Certainly in the music and mathematics stuff Lacan shows up in footnotes but Kittler now talks about Lacan's three-fold system of real-imaginary-symbolic as essentially a methodological distinction. More than Lacan, Kittler is loudly in debt to Heidegger, and Kittler uses media as a way to get at the infrastructure of being. Kittler and Foucault are both battling for the legacy of Heidegger – indeed a lot of people are so battling – but they both make very different kinds of inquiries into the fundamental constituents of being. To really simplify for Foucault, it is discourse and for Kittler, it's media. The Lacanian triad is just a kind of an updated trinity that we can exploit for thinking.

PACKER: Fair enough. And I appreciate that, because I really don't want to spend any more time on Lacan than necessary (laughs). So, in another recent essay, "Calendar, Clock, Tower,"[8] you use the term logistical media that I believe comes from Virilio. I'm wondering what more you can tell us about this term and why it's useful for media scholars. What does it do for us that other terms don't do? It reminds me in a way, of Raymond Williams' insight in *Television*,[9] that all media begin to some degree as a means for solving an immediate problem. I'm wondering if that's the direction of your recent work.

PETERS: It is. I think I might have stolen the term "logistical media" from Paul Virilio or from a friend of mine who worked in logistics at Sainsbury's grocery store in London. And it also could have been invented by Judd Case, my former doctoral student, who wrote his dissertation on radar which is the first systematic study of a logistical medium, so as usual it's sort of hard to nail down intellectual origins. But this concept stresses the infrastructural role of media. The concept puts storage, time and space, and processing front and center. Obviously in your own work media play an infrastructural role (such as screens).

A second point is that the notion of logistical media allows us to rewrite the history of media in such a way that we can see the audiovisual innovations of the nineteenth and twentieth centuries as a historical deviation. Media as large entertainment machines, providing drama for a dramatized society as Raymond Williams would say, are relatively unusual in history. The norm is media as data-processing devices. This notion is not unique to Kittler. It's kind of the starting point in German media theory to take writing as the archetype of a processing medium, to see media as paper machines. Thus we can rewrite history and civilization as the history of media. There are many primordial logistical media – writing obviously, archives, maps, roads, points, indexes. Names too – to be a human you have to have a name. But names, like persons, are addresses, in one of the great, slightly cold-blooded points of Niklas Luhmann. You locate people on grids with names. Money is probably of course the greatest of all logistical media. Also key are units for organizing time, space, authority: stamps, weights and measures, calendars, clocks. You could sort of write a history of the world in terms of calendars and clocks because those who control the clock and calendar have the real power. It's the state or military or church or the scientists who control time, and they've always used media to do it. My late Iowa colleague Carl Couch liked to say that market, temple, and palace were the three fundamental societal forms, and all three are always haggling over control of time and space. The Mayans consolidated their authority with time-keeping. So did the Aztecs, the Chinese, the Babylonians, the Egyptians, the Jews, the Romans, you name it. NASA and the Navy now keep time for us. Apparently the tsunami in 2005 altered the earth's rotation slightly so they had to readjust the earth's coordination with the stars, changing the setting some slight sliver of a second.

PACKER: I had no idea that things internal to the planet's mechanism could alter the orbit. I would have thought the earth has to be affected by some external force to create such a pronounced change.

PETERS: Well the earth apparently used to spin faster. According to fossil records, there were once perhaps more days in the year. And apparently the moon used to be faster too so that there used to be a 28-day month and you can tell this by looking at mollusks which had a monthly sedimentation in synch with the phases of the moon.

PACKER: And this actually gets me to my last point; using mollusks as a media for reading history. I quite like your essay "History as a communication problem."[10] There are a couple points I want to pursue. One is that new media discoveries will produce whole new histories and give us a new sense of our history. Things of which humans had no previous understanding can, in a sense, radically alter how we understand ourselves and our past.

PETERS: The emergence of the past.

PACKER: Yes. We ultimately have no sense of what in the world might become a carrier or a medium of historical information. Who would have thought that fossilized mollusks would teach us that the moon once spun around the earth at a faster pace? Something else that becomes apparent in the final passage of "History as a Communication Problem" is that you seem fond of lists.

PETERS: Ah, very good.

PACKER: I have two questions about lists. One regards the set of lists you've provided of possible communication topics or projects. What's frustrating for others of us in the field is we have no novel object left to study. You've used all of them, you colonized all of them by making the list, the master list. Second, every list breaks down at some point. The logic of the list when taken to its extreme undoes the list. So I'm wondering are these lists a call to the field? Are they a challenge? Or are they a way of saying "look, it should be obvious to you if you look through this list that there is a new way of thinking about media. If you think about these objects as media, it forces you to have a new kind of imaginary for what the field might accomplish."

PETERS: My lists are first and foremost a battle against my own finitude because I want to write all these books and I can't do them all so I'm throwing ideas out there. Some species multiply like frogs by reproducing in bulk and then abandoning the spawn and others like humans and elephants reproduce in small numbers but invest enormous time and attention for years and years and years in their cultivation. And my lists are sort of a frog-like, disseminative moment, hoping that a few of them will spread somewhere.

PACKER: It will bear fruit elsewhere.

PETERS: Yeah. Paddy Scannell and Pete Simonson have both pointed out my love of lists. I am actually working on an essay on lists and of course was disturbed to see that I was trumped by Umberto Eco, who has a book on lists. There's something comic about each list's attempt to be infinite since each list also displays the impossibility of infinitude. Also comic is the inevitable juxtaposition of items that don't seem to belong together. Foucault of course starts out *The Order of Things* with Borges's list from a supposed Chinese encyclopedia. There's something surreal about the internal order of a list because you can never get these things to line up. The surreal quality of every list reveals that all classifications are preposterous on some level. Lists are a check on the hubris that concepts can manage the world.

PACKER: They never hold, but they're also shows of mastery, right?

PETERS: Maybe I should stop trying to catch the cosmos in a list?

PACKER: No, no, don't. I'm not being critical of the propensity to list. There's a great moment in Don Dellilo's *Underworld* where one of the characters talks about each and every part that comprise a shoe. And he knows the name of every single one of them. And his point in listing all

the parts is to point out how much knowledge of the quotidian world is lost to all of us who don't know the names of everything right in front of us. Yet his listing of the parts of the shoe is also proof of his mastery of a given area of knowledge.[11]

PETERS: I think it's more like an impossible grasping, like Moses atop of the mountain looking at the promised land saying "I'm never going to be able to go in there, please go in there and settle it for me."

PACKER: So it's neither a to-do list nor a wish list. It's something…

PETERS: To-do for someone else. I hope it seems generous, like you know, look at all of this unclaimed land out there. But I see how it can also be seen as paternal.

PACKER: I have to admit, my half-hearted complaint comes from trying to help graduate students generate new topics for their research. You want them to be creative progeny. And your lists coincide, not necessarily with my lists, but with my way of thinking about how you might generate a new list. And that I quite like.

PETERS: I'm not sure if I believe in new ideas. Mark Twain said the great thing about being Adam or Eve was when they said a good thing they knew they were the first to say it. "History as a Communication Problem" draws on the line from Arendt that "the past appears under the guise of necessity." She meant *guise* because the past is the most dynamic thing there is. And so, when we have a new medium, a new mollusk, that reveals something; is that something new or is that something old? In a funny way the past is the most renewable thing we have. Hans-Georg Gadamer famously argued that tradition is the condition of possibility for innovation such that embedment in the past is the only way you can rethink something. The past is not past, it is this archive that is ever-accessible in different forms or different moments for play, for reading, and some of it is unreadable or difficult.

PACKER: And some of it's lost.

PETERS: Yeah. Absolutely.

PACKER: It's not that some, but most of it's lost.

PETERS: In different ways in different times.

PACKER: Yet, it's somewhat related to the issue of being creative in our historical work. I think the newness and creativeness that Foucault tries to get at is the notion that histories are fictions. We kind of know they're fictions but, there's a demand for fidelity to the archives, to the medium, to the mollusks. On the other hand, it's a matter of figuring out what this mollusk or archive is telling us that nothing else could, or has not yet been able to tell us. That's the creative endeavor; how to make these things speak something that can't be spoken otherwise.

PETERS: The amazing thing about language, for instance, is that it allows us every day on a routine basis to generate sentences that have never, ever, been uttered before in the history of the human species, and yet are instantly intelligible. How do we do that? How do we have this constant production of emergence?

PACKER: That is profound, but it makes me wonder to what degree we are communicating even in these moments. You draw on this notion of incommunicability quite a bit. I want to move to one of my favorite lists of yours, and it's connected to lost communication. It's from *Speaking into the Air* in the section on the dead letter office. You wrote, "the dead letter office deals with the materiality of communication, not its supposed spirituality. The need for it to exist at all is an everlasting monument to the fact that communication cannot escape embodiment and there are no such things as pure signs on the model of angels." Two pages later you provide a sublime list of various sorts of dead letters: conversations that children have with their imaginary air- friends when others are not around, the smell of mammoth meat frozen a mile deep within a glacier, the letters in the pockets of kamikaze pilots, what the jawbone felt under the dentist drill while the nerve was numb from Novocaine. And you end by asking "what is the meaning of the letter burned in the dead letter office whose writer does not know if it is lost and whose recipient does not know it was ever sent." And I'm wondering if you could answer your own question. What is the meaning of the letter that is never known whether it is received?

PETERS: That question comes back to biology at some level. What happened if there was this horrible thing, the neutron bomb of the 1980s or 1990s, that would wipe out all living creatures but not touch any material objects? So, what would the accumulations in museums and libraries and record collections and files mean? Would they be a "message" without living creatures to interpret them? But here it gets really messy: this *is* our situation. We have cultural contexts that exceed any possibility of mastery, even the slightest acquaintance of any living creature. Most of the universe has no cognitive guardian, and most of it lies untouched by any intelligence, at least mortal intelligence. The vastness of the cosmos and the limits of our knowledge make up the archive problem. We're always keeping all those papers and video films alive by oxygen-saturated blood-soaked brains. When the blood-soaked brains go, is there still signification? Did the Egyptian hieroglyphs on the Rosetta stone signify for centuries before Champollion deciphered them? The Jesuit Athanasius Kircher in the seventeenth century claimed to pull full sentences out of particular hieroglyphs. He had no idea that there was a phonetic structure. He thought Egyptian some mystic, symbolic thing, and just made it up. And so from a happy cultural studies point of view, we can praise him for being an active audience, but of course he got it wrong: that is not what the hieroglyphs said. There's got to be the rigor of material otherness in the original if we take historical truth seriously. You have to learn the language by its rules, not yours. This is one thing that Kittler is always insisting on. He is excessively against sociology and cultural studies because he thinks they give too much weight to the subject. But math is cruel. It is unkind to your

will and sentiments. You can easily be wrong. It is a tough master. But math is also music (another tough master). The inhumanity of math and music makes Kittler wild about both. Both belong to the gods. Both are an interesting mix of material and immaterial. Most mathematicians are closet Platonists because they believe in the reality of numbers, but math, as many such as Sybille Krämer have argued, is impossible without the flat laboratory of paper and related visual and graphic writing practices. Where was I going?

PACKER: The meaning of the dead letter. In part you're suggesting that of course there's the demand for interpretation, for meaning, for something to be there to make sense of it. Probably ideally that should come from the context of its creation, the context of its expected reception. So that's part "a". Part "b" seems to be what mathematics might suggest – sending messages out to the cosmos hoping that there is a universal language that transcends the immediacy of human intelligence, maybe transcending the specificity of any potential form of intelligence that it will reach. When humans pass, we won't be around to know what things we've left behind. We'll become the mollusk.

PETERS: Absolutely. It's again the dilemma of the witness. You don't know what little bit of trivial experience will blossom into something able to free someone from a death sentence. Key questions of justice turn on bits of evidentiary flotsam that you miss if you weren't attentive at the moment, just like key questions of history. There is a similar problem about how language ties to the world. In *Speaking into the Air* I briefly played with the question of how many angels can dance on the head of a pin, because that really is a question of where signification and matter come together. The medieval answer is an infinite number because angels have no material element. And I of course would want to insist that there'd have to be a finite number.

PACKER: It depends how big the pin is.

PETERS: Yeah, exactly (laughs). Or how good the angels' inner ear system is. One of the funny things about being a metaphysical materialist, as I am, is that when you argue for continuity between matter and meaning, you can end up not being able to tell the materialist and the spiritualist apart. That's one thing that gives *Speaking into the Air* a particularly odd flavor: you know, it's a materialist argument but it's a religious argument. Since the Enlightenment materialism was the enemy of religion but here you've got both at the same time. Part of that is my own religious tradition which is materialist in terms of how the universe is put together. A canonical line from Joseph Smith in Mormon scripture states: "There is no such thing as immaterial matter. All spirit is matter, but it is more fine or pure…"

PACKER: This is nicely related with the last question I have. One recurring theme that runs through the history of communication is the desire to give a physical manifestation to what are seemingly immaterial if not

outright non-existent entities. You discuss several including ectoplasm, teleplasm, the unconscious, the actor, and the soul. During a discussion of teleplasm, though seemingly not exclusively referring to it, you state "materialization is quite literally the attempt to recreate the flesh in telecommunication." I kept wanting to flirt with the notion of this as a "will to materiality" in which we feel that we must give material form to all communicative practices. So we hang the meat of the argument on the fact that there's some material that we can grab on to. I think that ectoplasm or teleplasm may be the ultimate expressions of this. Where does this will to materialize come from?

PETERS: Let me give two different responses to your wonderfully apt phrase about hanging the meat of the argument, which summarizes the problem perfectly. The first is that our sense organs are limited. Bandwidth is limited for eyes and ears and everything else. And so this is a classic kind of Kittler point, to look at the senses as processing devices whose powers of discernment turn on "just noticeable differences" or bigger. For there to be any kind of signification, it has to be material, registered. So in this sense, all communication necessarily involves a will to material manifestation. Second, and more broadly, perhaps my critique of the teleplasm and ectoplasm people goes back to your point about an essential rivalry in visions of afterlife. I think I'm defending birth and finitude, the materiality of being born and I'm not the first one to point out that material has the word "mater" in it, mother. Aristotle's word for matter was "hyle" which meant, more or less, *wood* in Greek, a link preserved in the modern Spanish cognate madera, which also means *wood*. Aristotle was notoriously sexist in his vision of reproduction, seeing the raw messy "matter-mother" of menstrual fluid being shaped by paternal sperm's noble form or *morphē*. Though we can't blame the whole desire to fly away from matter that is such a part of western culture on Aristotle, there is obviously a deep sense that matter is inferior to form. (One reason why materialists can wear a chip on their shoulders.) Matter – mother earth or actual mothers – is the ultimate horizon of our condition, and there is, I think, an ethical demand to respect its limits and preciousness. The ectoplasmists, in contrast, seem to dream of an endless supply of matter-on-demand and thus fail to get the lesson of nonrenewable resources. It's as if they want to outdo the womb, make flesh with machines and transport it beyond the supposed bondage of gravity. But gravity is actually a handsome condition. I like jumping and running; therefore, I like gravity.

PACKER: I'm going to end by giving you a chance to give us one final list; it may be a list for new materialist media projects.

PETERS: This is a sort of secret project that I had of writing the communication or media history of the world. And so, a list would go something like big bang, gravity, chlorophyll, oxygen, fire, sexual reproduction, mammals, upright posture, pair-bonding, clothing, continuous hair growth, jewelry and language, container technologies like Mumford's

own list of baskets, preservatives, family, language, ritual, cities, and reservoirs, and then calendars, money, names, maps.

PACKER: That's a pretty all-encompassing list, lots of time and space covered, with themes running across both frontiers. So, great, I really appreciate it.

PETERS: It's been really fun.

PACKER: It has been a lot of fun. Thanks!

Notes

1 *Speaking into the Air: A History of the Idea of Communication*, University of Chicago Press, 1999.
2 "Reflections on Mormon Materialism," *Sunstone*, March 1993, pp. 47–52.
3 James Carey (2005). "Historical pragmatism and the internet." *New Media and Society* 7(4): 443–455.
4 "Strange Sympathies: Horizons of Media Theory in American and Germany" in *American Studies as Media Studies*, eds. Frank Kelleter and Daniel Stein (Heidelberg: Universitätsverlag Winter, 2008), pp. 3–23.
5 The Institute for Communications Research at the University of Illinois Urbana-Champaign where Carey was located from 1960 to 1991.
6 Carey, James W. "Technology and Ideology: The Case of the Telegraph," *Prospects* (1983), 8: 303–325.
7 Carey, James W. (2006). "Configurations of culture, history and politics." In *Thinking with James Carey: Essays on communication, transportation, history*, 199–225. New York: Peter Lang.
8 "Calendar, Clock, Tower." *Deus in Machina: Religion and Technology in Historical Perspective*, ed. Jeremy Stolow (Forthcoming), Fordham University Press, New York.
9 Raymond Williams (1974). *Television*. Routledge, New York.
10 "History as a Communication Problem." *Explorations in Communication and History*, ed. Barbie Zelizer. London: Sage, 2008. 19–34.
11 See pages 540–542.

Part II

Communication time/space

Dormant (Pot, earth, worms, and video of a woman on a gurney).
Francesa Talenti.

Chapter 3

Ubiquitous sensibility

Mark B. N. Hansen

If media determine our condition, they have never done so more obliquely. Today's media, I want to suggest, have fundamentally changed the mode of their address to the world and to us. No longer predominately focused on operations of recording, storage, and transmission, media now operate as platforms for immediate, action-facilitating interconnection with and feedback from the environment. As I see it, this shift is in very large part a function of media's dissemination into a ubiquitous and utterly indispensable element of daily life: with today's digital devices and "smart" chips, media have achieved a *condition of transparent ubiquity* without historical precedent, and, I would suggest, have catalyzed a qualitative revolution in experience, an expansion of sensibility so substantial as to alter fundamentally its very *power*.

Passive sensing

At the center of this revolution is the massive increase in the capacity for passive sensing ushered in by today's digital devices. In addition to their active uses – making calls, taking pictures, registering threshold crossings, etc. – our phones and the sensors that now inhabit our lived space passively register massive amounts of behavioral and environmental data without any active involvement, decision to initiate, or even awareness on our part. With the upsurge in the passive mode of sensing, we encounter a massive expansion of sensibility that puts our longstanding privilege as the world's most complex sensing agents into question. For, although they are, taken individually, vastly less complex – by many orders of magnitude – than human bodyminds, cumulatively and with their capacity to operate almost entirely without interruption and across a vast range of scales, today's devices and sensors have already begun to dwarf us in their ability to gather and generate sensory data.

With this understanding in mind, we can properly appreciate the challenge faced by the contemporary media theorist. For it is no longer the case that media (primarily) mediate *our* senses; rather, they mediate – if "mediate"

is still the proper term – sensibility itself, and they do so in the overwhelming majority of instances *prior to any engagement "we" might have through and at the level of our sense organs*. This is also to say that media operate at sub-macroscopic scales and outside our direct awareness. How, we must ask, are we to take stock of media's impact on sensibility when this impact occurs both within the *total* environmental surround indifferently encompassing human and worldly sensibility and also, predominately, at scales that are *undetectable* to macroscopic or perceptual sensation?

Accessing this impact requires a new approach to media. To address today's media, we must abandon both object-centered *and* body-centered models of media experience in favor of a radically environmental approach, the first principle of which is that any act of sensation implicates the entirety of the universe forming the immediate background for that act. In light of media's direct engagement with sensibility, such models cannot but appear superficial and after-the-fact: they comprise higher-order compositions of more "primordial," impersonal or prepersonal experience, compositions that are temporally subsequent to, and to greater-or-lesser degrees reductive of, the elemental impact of media on sensation. As they predominately operates in our world today, media do not impact our experience (and thus cannot be theorized) separately from their impact on the global cosmological sensory background in which such experience is immanent and out of which it emerges.

Cognitive ergonomics

If modern media history would appear to witness the assimilation of all sensory streams into a single media model,[1] recent developments promise a return of sensory heterogeneity. One key component in this return is a renewed emphasis on the temporal dimensions of media processes, including the production, dissemination, and inculcation of images. As artist Warren Neidich has astutely discerned, this emphasis on the temporality of media implicates the correlation of lived experience with neural plasticity, and prompts a shift from visual to cognitive "ergonomics" (by ergonomics, Neidich means the tuning of sensory material to the requirements of the nervous system). Whereas visual ergonomics is "primarily concerned with the representation of static space," cognitive ergonomics "is involved in describing temporality. … Cognitive ergonomics, as its name implies, takes into account the whole brain and conceptual system, as is necessary when organizing technologies that interface with the entire body and being."[2] For my purposes, what is most significant here is how cognitive ergonomics liberates temporality – and specifically, microtemporal processes of neural imaging – from its longstanding cultural subordination to the spatial/visual image.

In advancing his claims, Neidich draws on contemporary neuroscientific research on time binding. This research has shown that visual and motor

cognition arises through the synchronization of microtemporally asynchronous quasi-autonomous processes, but – crucially – without recourse to any coordinating, higher-order binding agent. As Semir Zeki's work on the visual cortex has demonstrated, distinct processes for recognition of color, motion, orientation, and location are bound by their mutual, though partial, overlapping, by the sheer fact of their happening within the same microtemporal window.[3] Because there is no need for any supplementary "agent" of binding on his account, Zeki considers these processes to be distinct "microconsciousnesses" that form the basis for our higher-order experiences of seamless, integrated visual sensation.

Cognitive ergonomics concerns itself with how such quasi-autonomous microconsciousnesses combine to generate macrosensations. Neidich contends that the creation of certain types of images and (I would add) certain kinds of media environments can promote particular patterns of assembly of macrosensations on the basis of the microtemporal operations of cognitive and visual processing: "aesthetics is constantly reassembling the partialities that make up the perception of physical objects and their relations.… [Only] those relations with an ergonomically consistent temporality will be inscribed into the secondary repertoire."[4] By tapping into the microtemporal dimension of esthetic sensation, Neidich's account forcefully underscores the imperative for us to correlate the technical mediation of sensation with the cognitive operation of the sensing brain and to address their resonances independently from the temporal reference frame constitutive of both image and conscious perception.

Impersonal sensibility

Contemporary atmospheric media environments solicit a mode of sensation that is molecular and diffuse, which is to say, a sensibility comprised of precisely those microsensory processes that must be characterized as peripheral to perception and conscious awareness. Because it falls through the cracks of traditional phenomenological accounts of experience, such a sensibility requires a methodological transformation of phenomenology aimed to recover its suppressed, though I would assert, originary engagement with subrepresentational, impersonal, microtemporal sensation. The "ubiquitous sensibility" characteristic of contemporary media experience contrasts starkly with phenomenological sensibility: where time-consciousness (to take up the anchor of Husserlian phenomenology) synthesizes time in order to create temporal unities that provide contents for conscious experience, microsensory processes synthesize time to create temporal unities for neural processing. Because they operate at a fine-grained temporal scale that cuts against the grain of phenomenological experience (at least as it has been traditionally understood), such microsensory processes must be considered to be nonconscious. The promise of today's media environments is directly tied

to this last fact: for if the sensory – or microsensory – dimension of contemporary technics evades the grasp of consciousness (and thus of phenomenology in its traditional forms), we can only "experience" it indirectly, by means of the enactive possibilities that "smart" environments afford.

Not surprisingly, this reenvisioning of how technics impacts experience directly implicates the most fundamental motif of the phenomenological project: temporality. Indeed, this impact is so significant that it necessitates a radicalization of the canonical Husserlian analysis of time. Specifically, it necessitates a radicalization that opens the deep connections between the phenomenological project and the operation of "worldly sensation," the sensibility (which is also to say the temporalizing) of the world independently of – or rather, from a perspective external and temporally heterogeneous to – the subjective process we know as (time-)consciousness.

The proximate source for this radicalization can be found in Husserl's failure to reconcile two properly irreconcilable commitments of his ongoing research: his radical insight into the necessity for a nontemporal, nonegological *absolute* foundation of temporalization; and his enduring methodological privileging of consciousness. In the late manuscripts on time (the *C-Manuscripts* from 1929 to 1934[5]), the symptom of this failure goes by the name of the "living present" (*lebendige Gegenwart*), and the crucial problematic Husserl repeatedly addresses – and repeatedly fails to resolve – is how to fuse two dimensions of the absolute flow of temporalization, namely its "standing" and its "streaming."

Husserl's failure forms the starting-point for Eugen Fink's development of a phenomenology of temporalization that overcomes the egoic framework Husserl could not quite manage to leave behind. Specifically, Fink (who was Husserl's final assistant and putative heir to his project) opposes to Husserl's figure of the living present the operation of "*depresencing*" (*Entgegenwärtigung*). Convinced that Husserl's fatal error was to have begun with time-*consciousness* rather than the more fundamental worldly temporalization within whose horizon time-consciousness is made possible and arises, Fink argues that the true problem of the phenomenological analysis of time is explaining how time is constituted independently of any presencing *in* time. "Horizon-forming depresentings [or: depresencings] are not any kind of intentional experience, not any kind of act that in some way first carries off some objective something, so that now presentification would be the countermove against this carrying off. Rather depresencings are a way in which original temporality itself comes about as temporal process – in which it temporalizes [*eine Zeitigungsweise der ursprünglichen Zeitlichkeit selbst*]."[6] Depresencing must thus be differentiated categorically from the living present: it is not the flow of time itself (i.e., the standing–streaming living present) but rather that which makes such flow possible: "The flow of time is just presencing [*Gegenwärtigen*], it takes place in time. Depresencing temporalizes time [*zeitigt die Zeit* – brings it about as temporal], depresencings are not in time."[7]

With this development, Fink overcomes the impasse faced by Husserl. Specifically, in the concept of depresencing, he finds a way to ground the presencing of consciousness within a more fundamental giving of time. Following this displacement, the analysis of time can only begin from *world*-time – the time that encompasses both transcendence and immanence – and must, moreover, reject the traditional approach (constitution via thematic objects) in favor of a focus on its own horizonality. When Fink asserts that "time-constitution is horizon-constitution, *not object-constitution*," his point is precisely that Husserl's most fundamental problematic *is* the constitution of the world as a dynamic, pregiven process.[8]

Fink's radicalization of Husserl's project informs my own wager here: namely, that technics *does* impact time at the level of its absolute constitution, which is to say, prior to any thematic *experience in* time, and that this impact paradoxically holds far greater significance for our experience than the fact that media proximately mediate our intratemporal lives. We might even say that technics' impact on experience is predominately indirect: technics impacts embodied experience – impacts the very emergence of such experience – *through or on the basis of* its impact on worldly depresencing. Given that my interest here – assessing media's impact on experience – retains an essential reference to the "ourness" of experience, the crucial question that arises concerns the way in which "we" are related to the operation of depresencing. How, we need to ask, is "our" sensing always already *part of an objective depresencing*, something that occurs "prior to" and independently of higher-order subjectively constituted experience?

Sartre's early meditation on the nonidentity of consciousness and ego furnishes a key resource for beginning to grapple with this question. By demonstrating that consciousness occurs primordially in a nonegoic, nonsubjectively unified mode, Sartre foregrounds the primordial impersonality of absolute consciousness. Before it becomes my consciousness, before it is unified around an ego or subject, consciousness is the more or less direct pickup of sensory information where whatever unity it has comes from its objectivity.[9] Like Fink, Sartre would seem to affirm the priority of absolute consciousness over any egological subjective experience: "The World did not create the me, the me did not create the World, they are two objects for the absolute, impersonal consciousness, and it is through that consciousness that they are linked back together. This absolute consciousness, when it is purified of the I, is no longer in any way a *subject*, nor is it a collection of representations; it is quite simply a precondition and an absolute source of existence."[10] Yet unlike Fink, Sartre subordinates the world to absolute consciousness, or more precisely to the absolute "impersonal spontaneity" of transcendental consciousness.[11] Accordingly, in order for us to resituate the primordial impersonality Sartre ascribes to consciousness at the deeper level of presubjective, nonconscious sensibility, we will need to anchor it within a physical – and not simply a mental – continuum. It is precisely such an anchoring that Fink's depresencing finishes. Following Fink's conception,

there is an originary sensory continuity that is presubjective, worldly, and immanent to the material world.

Temporal shielding

With its goal of reforming modern subjectivism and its own peculiar insistence on the physical continuity of the universe from moment to moment, Whitehead's philosophy provides crucial tools for developing an account of media's prepersonal, environmental impact. Despite his own lack of attention to media, Whitehead's concept of prehension furnishes the general mechanism for approaching media from a radically environmental perspective. Specifically, Whitehead's account of prehension as the most basic form of relation in the universe (and the basis for all higher-order relationalities – what he calls "societies") yields a single sensory continuum stretching from the most elementary level of experience (the production of actual entities) to the most complex (conscious sense perception). Moreover, Whitehead conceives of each "concrescence" of a new actual entity as involving the entirety of the universe (actual entities are the real things at the basis of our experience that we, paradoxically, cannot directly experience, but that comprise the ontological reality of all that we do experience). More technically, each concrescence of a new actual entity "prehends" (where "prehends" roughly means grasps or enters into a relationship with) everything that is actual in the universe up to that point (its total state at that moment), and to do so, operates both positively (a "positive prehension" is a relation of inclusion of something in the new actual entity) and negatively (a "negative prehension" is the exclusion of something from the new actual entity, where importantly exclusion is *still a form of relation*).

This understanding of relationality contrasts with – indeed, is more radical than – other conceptions, including Bergson's notion of the body as a center of indetermination within a universe of images.[12] For Whitehead, each concrescence of a new actual entity implicates *the entirety of the universe* as it was prior to that concrescence, and thus describes the situation of every creativity in its fullness. Put more simply, Whitehead's understanding inverts our default modes of thinking agency in that it *includes* every aspect of a situation – no matter how tangential it may be to the "subjective form" in question – in the analysis (and in the efficacy) of that agency. Without being able to do justice to the intricacies of Whitehead's account, what I do want to single out for our attention here is the possibility for individual prehensions, following their participation in the concrescence of a given actual entity, to wield "objective" agency (where "objective" means simply that they have become part of the data of the world available for new concrescences). This agency, as we will see, is key to understanding how media's peripheral or environmental impact can contribute to "subjective" actions.

Elsewhere, I have termed this agency the "promiscuity of prehension" and have connected it with Whitehead's conceptualization of the "superject" (or the "subject-superject") which, as I understand it, designates not simply the power of past actual entities to inform new concrescences *but also their power to act in higher-order compositions of societies* (where "society" is understood in its Whiteheadian meaning of a composition of actual entities into an experiencing assemblage). This superjectal agency of prehensions – their capacity to act in societies independently of their operation in concrescences of new actual entities – opens up an environmental dimension of agency: more exactly, it explains how what can be defined as environmental in relation to specific subjective processes itself wields agency on those processes *without needing to be directly incorporated into them*.

One way to understand this environmental dimension of the superject is in terms of the category of intensity, which philosopher Judith Jones has recently elevated to a pivotal role in Whitehead's project.[13] On such an understanding, what happens in the passage of actual entities into time – the passage that inaugurates experience as such – is nothing less than a dispersal of the ontological power of the actual (concentrated in the concrescence of an actual entity) into the manifold of prehensions liberated from their narrow subjective unity (directing the concrescence in which they participated) and set forth – as superjectal, environmental microagencies – into the world. Once dispersed, prehensions become the source of experiential intensification: for, from the moment they become available for experiential compositions, prehensions operate predominately from their superjectal side. As such, their contribution to the unfolding of experiential situations occurs, as it were, from the perspective of the environment, which is to say, by intensifying the experience of subjective processes.

It is important that we appreciate the temporal dimension of this superjectal, environmental agency of prehensions. Specifically, we must understand how, on Whitehead's account, the agency of any society is complex in the sense that it involves multiple – and in the case of human beings, very, very many – microagencies, each with its own temporal reality. More precisely, the operation of any society *always* and *constitutively* involves a temporal gap between the operationality of its elements and its own operationality. In order to participate in the operationality of a higher-order society, lower-order elements must have ceased to be operationally present. These elements are past at the moment when they are unified in an operationally present higher-order society.

This point has been made by David Ray Griffin who stresses how the temporal delay in question here underwrites Whitehead's novel conception of the part-whole relationship; for Griffin, what is key to Whitehead's attempt to move beyond the abstractions that give us sense perceptions of "solid material bodies" "is this idea that, in experiential wholes, the whole is a prehensive unification, in which a multiplicity becomes a unity, and that the relation between the whole and the parts is a *temporal*, never merely a

spatial, relation: The whole arises out of parts that were, in their own subjective mode of existence, prior to it."[14] While this account clarifies the temporal relations between the higher-order unity and its constitutive elements, it fails to address the *continued operationality of these elements* after the moment in which they are objectified and integrated into a higher-order unity. In other words, at the very moment that the higher-order unity is operationally present, the subprocesses that, as immediately past presents, comprise its content, *nonetheless continue to function in their own ongoing present*. More precisely, they continue to function *alongside* (but without communicating with) the higher-order societies that they (in their slightly earlier operationality) now compose.

On this point, Whitehead's analysis converges with Husserl's in interesting and fruitful ways. In both cases, emphasis is placed on the ongoing operation of temporalization at the subperceptual scale (Husserl) or at a host of subperceptual scales (Whitehead), even as just-past processes (Husserl's "retentions," Whitehead's "nonsensuous perceptions") are united into higher-order achievements (lived experiences and sense perceptions). In both instances, temporalization is a "power" that expresses itself at a host of scales and in disparate sensory experiences. What Whitehead specifically introduces to the mix here is an appreciation for the rhythmic diversity or sensory dispersion involved in any experience, the fact that at the moment that (say) time-consciousness might be intending a temporal object, lower- (and higher-) order processes that it implicates (or that it is implicated in) *remain ongoing*, which is to say, operationally present. Experience at any level of complexity is, for Whitehead, a rhythmic pulsating of partially overlapping processes that necessarily involves the comingling of disparate sensory temporalizations.

What facilitates Whitehead's temporally differentiated rendering of this comingling is the crucial technical distinction he draws between two modes of what I am here calling operationality. In his account, Whitehead glosses these modes through a series of distinctions including: subjective vs. objective, private vs. public, product of final causality vs. product of efficient causality, etc. The key point is not simply that every occasion of experience has two modes of operation – one focused on its own subjective genesis, the other on its dissemination into the world – but that these two modes are separated by an ineliminable temporal gap. To illustrate this situation, Griffin considers how neurons assemble to create mental experience: "… by distinguishing between the subjective and objective modes of existence of each occasion of experience," Whitehead avoids the contradiction of saying that something can "*in the same respect and at the same time* be both X and non-X, because the contrary attributes are not assigned to the same thing at the same time or in the same respect. The many neuronic experiences that happen more or less simultaneously in one moment are, in their subjective mode of existence, truly many, with no windows to each other (contemporary occasions are independent of each other); it is only in their objective

mode that they are a 'many becoming one'."[15] What this distinction explains is how neurons can continue to operate or to presence *at the same time* as they participate in the composition of higher-order unities.

To describe the different processes at issue here and to explain how they can overlap, let me invoke Christian de Quincey's incisive distinction between three levels of "temporal binding" in Whitehead, again in reference to the example of neuronal operationality. "*Unit* binding" names the unification of individual neurons via prehension of their own past "neuronic occasions"; "*horizontal* binding" names the unification of multiple units on the same level (e.g., billions of neurons in a human brain); and "*hierarchical* binding" names the prehension of multiple, now objectified units from one level by a subject on a higher level. What de Quincey's typology helps us to appreciate is the absolutely crucial fact that the temporal interval between modes of operation operates *at all levels of binding* both *within* single levels and between levels. It thus qualifies the most basic forms of unit binding that characterize the persistently present operationality of neurons, just as much as it does hierarchical leaps in complexity between levels. With his distinction between hierarchical and horizontal/unit binding, de Quincey puts in place what is necessary to explain how a higher-order organism perceives its own past sensory confound *while continuing to overlap operationally* – at the very moment of this perceptual act – with new and perpetually present microsensibilities from which it is "temporally shielded" and which will ultimately yield new perceptions-to-come.

Experiencing the overlap

Let me now briefly turn to an example – Olafur Eliasson's *Your colour memory* – that exemplifies the rhythmic overlapping at issue in this differentiated account of temporal binding. Eliasson's work, which I have already once explored in relation to my radicalization of Husserl's account of time-consciousness,[16] furnishes a perfect opportunity for participants to experience the overlapping of their own diverse quasi-autonomous sensory engagements with the world. The work is an immersive panoramic color installation designed to solicit the experience of afterimages catalyzed by subtle juxtapositions of color fields. The work is all about delay, as I had earlier appreciated, but now I can add that it is all about multiple delays overlayed – via our experience – on one another.

To experience the work, the participant enters an enclosed panorama and allows herself to be engulfed by the immense single color field in front and on all sides of her visual field; the colors are changed out, via a gradual fade, every 30 s, and soon after entering the installation, the participant's present sensory experience becomes supplemented by the interference of afterimages (themselves generated from the color juxtapositions). These afterimages are literally the ciphers in the operational present of conscious

sense perception of just-past sensations that occurred in their own operational present, although without accessibility to consciousness. More than just "self-contained events," these afterimage/ciphers are indicative of the ongoing operational presencing that is taking place beneath the level of conscious awareness, and that encompasses a plethora of sensory processes operating in conjunction (following the notion of unit binding) as well as in temporal disjunction (hierarchical binding). All of this, however, becomes more complicated still, as our brain – with its own proper variegated temporalities – begins to respond to the double solicitation of the perceptual opportunity (seeing colors in the panorama) and of the sensory opportunity (experiencing the interference of afterimages). What ultimately results is a highly complex and multileveled, rhythmically differentiated experience that is acutely sensitive to the concreteness of each participant's engagement with the installation.

This complexity is not lost on Eliasson, who emphasizes the singularity of every participant's experience and attributes that singularity not simply to the individual selectional history of each brain (following models like Edelman's "secondary repertoire," on which Neidich draws to characterize "cognitive ergonomics") but also to the actual concreteness of what each experiences in the various operational presencings composing her aggregate experience (when exactly a participant entered the room, how long she has been there, etc.). What lies at the core of this complexity is the multiplicity of temporalities whose overlapping becomes partially perceptible in the experience solicited by the installation. As Eliasson explains, "The retinal fade-out occurs with a delay of about 10–15 s in relationship with the actual change of color in the room. There are, in other words, two color curves at work: one pertaining to the work itself, one being created belatedly in your eyes. One could argue that another curve finally appears, namely the curve of colors perceived by the brain, which is an average of the two preceding curves."[17]

Far from simply being the result of the endogenous selectional history of a particular brain (which could be modeled via Husserlian retentionality), this third curve is responsive to the total environment shaping its genesis. That is why every participant has a unique experience, but it is also why some aspects of that experience remain beyond the participant's "control" and outside of her "functioning": because of the "cosmological situationality" of this installation, certain aspects of each participant's experience appear to emanate directly from the environment, in a way that need not be subordinated to the genesis of what Whitehead would call a subjective form.[18]

Intensifying the sensory commons

"Whitehead held that a full account of the appearance of green in a particular situation would refer not only to the green and to its situation but also to

the percipient event (i.e., 'the bodily life of the observer') and to the whole of nature in that duration."[19] William Christian's insightful characterization of the qualified "autonomy" of "eternal objects" in Whitehead's philosophy should recall the earlier discussed notion that every actual entity prehends the entire universe as it is available at the particular moment of its concrescence. In both cases, something that we would ordinarily conceive of as relatively bounded in scope – on one hand, an actuality or agent; on the other hand, a quality – is shown to be radically relational, that is, to be related not simply to the entire situation actively implicated in a genesis or expression, but to the entirety of the universe that is coincident with this latter.

What the example of color and its robust environmental confound adds to the earlier picture of the cosmological implication of any concrescence is an indication of the role and necessity of *mediation* in any adequate account of the real connections between real things. Insofar as they are defined by Whitehead as "pure potentials" which are both "timeless in their mode of existence and indeterminate as to their physical realization,"[20] eternal objects – of which colors are prime examples – provide just such mediation. By lending a "form of definiteness" to or specifying the "how" of the concrescence of actual entities but also, and more importantly, lending "definiteness" or specifying the "how" of societal compositions, eternal objects facilitate – and indeed, are absolutely required to secure – the radical relationality that Whitehead postulates. To put this in the simplest way possible, eternal objects are necessary to mediate the passage of the past into the present, or in other words, to facilitate the multiple and diverse deployment of the agency of actual entities in *experiential* situations (i.e., in the composition of societies).

Once again, Christian pinpoints the entailment at issue here: transition from the past to the present involves "the repetition or reproduction of subjective forms of feeling. Some form of definiteness of feeling in the antecedent is repeated, or a feeling having this form of definiteness is reproduced, in the consequent actual occasion. In this way Whitehead's theory of influence requires the existence of entities which can be multiply located, as actual occasions cannot. Their function, as he puts it, is relational. Further, since there are no *a priori* restrictions on the influence one actual occasion may have on another, any such entity must be such that it *might*, abstractly speaking, be realized in *any* instance of transition."[21] Christian's point is that eternal objects are necessary so that individual actual entities, once objectified and available for new concrescences *but also, crucially, for composition into societies*, can function multiply, that is, can be repeated many times over in different new concrescences *and* societal compositions. We can now see exactly why eternal objects are key to the radical relationality of Whitehead's environmental account of experience: they are the "medium" that makes it possible for any actual entity to become part of a future composition, and thus for the radical interconnectedness of the cosmos that is implicated in any and every occasion of experience.

In closing, I want to return to the question of contemporary media and its relation to this generalized notion of sensory mediation. By affording us unprecedented access not only to our own embodied subperceptual processes, but also to the extraperceptual impact of the total situational environment on our sensory experience, today's atmospheric media help us to experience our multiscaled, multitemporal belonging to what I would conceive of as a sensory commons. Eliasson's *Your colour memory* points to some of the potentiality opened by such access. Specifically, by putting us into a reverberating coupling with the circuit linking our actual perception of a set of eternal objects (colors) to our sensory experience of afterimages generated by our subperceptual processing of these perceptions, *Your colour memory* makes experientially salient the way that our experience is itself complexly imbricated within an entire experiential confound that encompasses not only the history of our experience within the installation and leading up to it, but also the agency of the installation itself and the larger environment it implicates. Far from being mere qualities of *our* experience (whether "primary" or "secondary"), these colors and the afterimages they catalyze are mediations of our real or concrete connection to the world, which is multiscalar and which involves no privilege on the part of any particular unification in virtue of which we can univocally speak of the experience as "ours." By bringing out the neural, microtemporal dimension of this real connection, *Your colour memory* attests to the power of today's atmospheric media to amplify and intensify our connectedness to the total situation of experience at any given moment of its happening and thus to impact "our" experience, as it were, from the environmental outside.

Notes

1 Following the thesis of media convergence made famous by Friedrich Kittler. See Kittler, *Film, Gramophone, Typewriter*, tr. G. Winthrop-Young and M. Wutz (Stanford: Stanford University Press, 1999), Introduction.
2 Warren Neidich, "Visual and Cognitive Ergonomics: Formulating a Model through which Neurobiology and Aesthetics are Linked," in *Blow-Up: Photography, Cinema, and the Brain* (New York: Distributed Art Publishers, 2003), 23–4.
3 See for example, Zeki, "A Theory of Micro-consciousness," in *The Blackwell Companion to Consciousness*, eds. S. Schneider and M. Velmans (New York: Wiley-Blackwell, 2007).
4 Neidich, 29–30.
5 Edmund Husserl, *Späte Texte Über Zeitkonstitution (1929–1934): Die C-Manuskripte*, ed. D. Lohmar (Dordrecht: Springer, 2006).
6 Eugen Fink, "*Vergegenwätigung und Bild*," in *Studien zur Phänomenologie, 1930–1939* (The Hague: Martinus Nijhoff, 1966), 24.
7 Fink, cited in Ronald Bruzina, *Edmund Husserl and Eugen Fink: Beginnings and Ends in Phenomenology, 1928–1938* (New Haven, NJ: Yale University Press, 2004), 235.
8 Fink, cited in Bruzina, 207.
9 For the early Sartre of *The Transcendence of the Ego*, consciousness just is equivalent to the qualitative experience it is having at any given moment in time.

There simply is no need for a further unifying agent and thus no reason to postulate an ego at all: "… there is no I on the unreflected level. When I run after a tram, when I look at the time, when I become absorbed in the contemplation of a portrait, there is no I. There is a consciousness of the *tram-needing-to-be-caught*, etc. and a nonpositional consciousness of consciousness. In fact, I am then plunged into the world of objects, it is they which constitute the unity of my consciousnesses … " (Jean-Paul Sartre, *The Transcendence of the Ego*, tr. A. Brown (London: Routledge, 2004), 13).

10 Sartre, 51.

11 "Transcendental consciousness is an impersonal spontaneity. It determines itself to exist at every instant, without us being able to conceive of anything *before* it. Thus every instant of our conscious lives reveals to us a creation *ex nihilo*. Not a new *arrangement* but a new existence" (Sartre, 46).

12 On Bergson's conception, see Hansen, *New Philosophy for New Media* (Cambridge, MA: MIT Press, 2004).

13 Jones proposes to replace "creativity" with "intensity," and thus to make intensity the very most fundamental dimension of Whitehead's process philosophy. See Judith A. Jones, *Intensity: An Essay on Whiteheadian Ontology* (Nashville, TN: Vanderbilt University Press, 1998).

14 David Ray Griffin, *Unsnarling the World-Knot: Consciousness, Freedom, and the Mind-Body Problem* (Berkeley, CA: University of California Press, 1998), 180.

15 Griffin, 180.

16 See "Ubiquitous Sensation or The Autonomy of the Peripheral: Towards an Atmospheric, Impersonal, and Microtemporal Media," in *Throughout: Art and Culture Emerging With Ubiquitous Computing*, ed. U. Ekman (Cambridge, MA: MIT Press, 2012).

17 Olafur Eliasson, "Some Ideas About Color," in *Olafur Eliasson: Your colour memory*, ed. R. Torchia (Glenside, PA: Arcadia University Art Gallery and Olafur Eliasson, 2006), 77.

18 Eliasson continues: "If I were to enter the color-saturated room some time after you, my experience of the color would differ substantially from yours, as you would already be enrolled in a sequence of wall colors and afterimages that determine your present experience. I, on the other hand, may not yet have produced afterimages that color my perception to the same degree – so to speak. Our perception of the room, therefore, depends on the amount of time we spend immersed in the changing colors and on what use the room is to us" (Eliasson, 78).

19 William Christian, *An Interpretation of Whitehead's Metaphysics* (New Haven, NJ: Yale University Press, 1959), 224.

20 Following William Christian, 216.

21 Christian, 217.

Chapter 4

It changes space and time!

Introducing power-chronography[1]

Sarah Sharma

Theorizing the politics of time and space are absolutely fundamental to a materialist approach to communication. In this chapter, I argue that the privileging of space over time in media studies risks aligning the field too closely with the logic of the market. I offer here a brief introduction of a materialist approach to time, power-chronography. Power-chronography is concerned with the multiplicity of time, the interdependent and inequitable relations of temporal difference that are compressed deep within the social fabric. Power-chronography examines how discourses about time and cultural practices related to the control of time elevate and devalue a range of bodies, practices, and labor.

"It changes space and time" is a rather excited incantation. I suspect you have heard some version of it before. It is a phrase that looms during office hours after the McLuhan weeks on the syllabus have passed. In recent years, locative media, Global Positioning System, ATMs, online banking, digital photography, portable music devices, and psychotropic drugs have all been space and time changers. "What do you mean, it changes space and time?" I ask. Well, they often say, this technology creates new spaces and new experiences of time. Because of this form of mediation, the body has a new relationship to space and time. This technology changes how people interact in social space. And quite often, "it changes space and time" is meant to capture some combination of all these things at once.

But when someone exclaims, "this media-technology changes space and time," what they are really saying is this *media-technology is a media technology*. That a media-technology alters the qualitative experience of time and space is hardly surprising. Variations on the theme, "It changes space and time" echo McLuhan's prolific statement "The message of any medium or technology is the change in scale or pace and pattern it introduces in human affairs" (McLuhan 1964: 8). Within medium theory, this is in fact the definition of what a media is, whether you think of media-technologies as tools, objects, or extension of the body and whether the media in question is a chair or a cellphone. All forms of media-technology, whether they are mobile, locative, clunky, minuscule, or fixed in place will alter, regulate, and change the

qualitative experiences of space and time. Media-technologies are implicit in the production of temporal and spatial parameters of communication and political possibility.[2]

As Harold Adam Innis argued, each civilization is cultivated by specific concepts of space and time that evolve from the dominance of particular media-technologies (1951). The rise of a particular complex of media forms arise out of social, economic, and cultural struggles that are tied to physical geography as well as different forms of political organization (1971). Depending on whether or not space or time is emphasized, by a particular media or complex of media, certain monopolies of knowledge and power arise in that civilization. Space-binding media, from papyrus to the radio, are durable and light, and can be easily disseminated and therefore foster centralization. Civilizations that emphasize space over time tend to be imperial powers, involved in the conquering of space at the expense of the maintenance of culture over time. Time-binding media, such as stone, are heavy, cannot be easily transported, and foster decentralization. Civilizations that emphasize time tend to be practical oral cultures where time is treated in terms of continuity. In time-biased societies, space becomes a bounded sphere to be protected rather than a means to extend power outward. Civilizations biased in terms of space will spatialize time. Time becomes a resource, commodity, and sequence of events that can be managed and controlled. A space-biased culture, when left completely unchecked by technologies that foster time, can become overly invested in the present (1972a, 1972b).

I invoke Innis because his work allows us to see, that by all such determinations, global capital depends on spatially biased cultures. It is not just that our dominating technologies are spatially biased but our ways of knowing, systems of power, and even notions of resistance, tend to be spatial. A uniform time and universal space changing essence to technology is something that marketers of media use to tout their wares in order to convince people that the new gadgets deliver a better life. To focus on this time and space *changing* often negates attention to the structural politics of time and space, specifically the different bodies and labor that are reorchestrated to elevate and valorize our media forms over most of humanity. Whose utopia is celebrated in the excitement that software companies connect schoolchildren around the world? Whose routes and paths do we valorize when we explain how mobile phones change space when we can play games on the bus or find a new pizza joint? Whose labor and time is reorchestrated to make any of these "new" things happen? What routes and paths are devalued and what regimes of dependency are created in these new techno-cultural practices? For example, the global of US software firms requires new forms of precarious wage labor overseas, like outsourced call centers and e-garbage sorting facilities employing child labor.[3] The political economy of locative media will determine that some neighborhoods are of no interest to the consumers who are being located into even more normalizing and knowable mobile populations. A materialist approach forefronts changes in space and time as

a series of interrelated structural shifts in power dynamics rather than a generalized social phenomenon. Likewise whether you celebrate or denigrate, "It changes space and time" is always already a politicized statement, an ideological claim upon someone else's, some other group's, time and space. In every animation of "it changes and space and time" there is a privileged itinerary and with this itinerary there is inevitably a reorchestration of the time and space of others. It is attention to this rhythm as well as the differential relationship to time and space that are central to questions regarding the materiality of communication.

In terms of our role as media studies scholars, we need to think about how our epistemology lacks an approach to temporal politics to offset this increasingly problematic privileging of space, and with it the spatial treatment of time. A political sense of time is missing, not in terms of continuity or tradition but in terms of a conception of the temporal as a relation of power and site of material struggle. A materialist approach to media is greatly inspired by medium theory and how media-technologies operate as environments in which social, political, and economic life unfold. But insights into the materiality of communication are found by further examining what sets of relations and forms of struggle are more likely to be incorporated with particular media in different social and political contexts, over others. The critical point from a materialist perspective is that technologies *themselves* do not change space and time. Media work in complexes that include other media forms, discourses, bodies, money, and labor. For every changed experience of space and time there is an attendant concrete infrastructure made up of bodies and buildings, owners and workers, as well as discourses and data. Multiple temporalities are produced; they are interdependent, as well as unevenly distributed.

Speed: a time trap in a spatially biased field

Since the spatial turn, cultural theory has paid close attention to how space is imbricated in struggles over power – whether by extension, expansion, colonization, imprisonment, banishment, confinement, inclusion, and exclusion. There are borders, territories, public spheres, scales, nations, globes, locales, and landscapes. It is now theoretically regressive, or politically irresponsible, to write about space without an acknowledgment of the uneven geographies and inequitable geometries of power that coproduce space and the culture of mobility.[4] However, the politics of time does not yet share a similarly documented systemic record or vocabulary anything akin to the politics of space. Yet in all of these forms of spatialized power you will find a temporal counterpart in the form of a material struggle. The politics of time it would seem is more subtly and quietly asserted, and in a sense unremarkable.

I suspect this is the case because shared space, or social space, remains the privileged construct in theories of democracy and public life. In terms

of sovereignty, the nation is defined by its territory, its spatial limits. Theories of Empire and globalization, even with a receding notion of the nation, are oriented around space. But, time is treated as a mode, a way of occupying political and social space. In other treatments, time is an issue of transmission and receivership: how long does it take for one to get messages, what is the proper speed of social interaction, or the right tempo of democratic processes such as election campaigns and sound-byte forms of political communication. The spatial turn was a move away from a particular understanding of time as history toward a multiple, many layered, and multi perspectival modernity. The spatial turn gave rise to a particular treatment of time across the disciplines.[5] With the end of history, came a focus on an imploding present and the politics of time became an issue of pace. This focus on speed ultimately comes at the expense of examining the deeper complexity of the structural politics of time as it is woven deep into the social fabric. The theoretical critique of the demise of democracy in a present-minded culture itself a spatially oriented critique. The discourse of the market and speed-theory is eerily similar. As I will discuss below, this is because neither the market nor this form of theorizing operates within a temporal conception of time. We would not expect the market to, but we must demand this of our field so that it is not subsumed further by market mentalities.

Speed theory, informed by the critical works of Paul Virilio, Bernard Stiegler, Zygmunt Bauman, Gilles Lipovetsky, Robert Hassan, and John Tomlinson, shares at least three fundamental provocations: 1. Space, understood as the preferred foundation for the political, has given over to the dictates of real-time. Public spaces are diminished by the rise of the apolitical non-places of speed culture. 2. Speed has evacuated the possibilities of a political public sphere leading to sound-byte political interaction, or what Robert Hassan terms "abbreviated thinking," or Virilio, "live contemplation" (Hassan 2003, Virilio 1999). 3. Speed-up catapults the world's citizens out of space and divides them in time between fast classes and slow classes. Fast classes are jet-setting fast and free whereas slow classes are those "people marooned in the opposite world are crushed under the burden of the abundant, redundant and useless time" (1998: 88). This is a new modern condition to which various monikers are given – Dromocratic society (Virilio 1998), Culture of Speed (Tomlinson 2007), Chronoscopic Society (Hassan 2003), or as Gilles Lipovetsky argues, these are *Hypermodern Times* (2005). The new chronometers are imploding and the beat of real-time echoes in every facet of everyday life. It is no longer the clock that speeds up the routinized day. It is email, the iphone, and instant computerized warfare. Virilio argues, "Today we have achieved three attributes of the divine: ubiquity, instantaneity, immediacy; omnivoyance and omnipotence. This is no longer a question of democracy this is tyranny" (1999: 17). Here, "Speed" is understood as the commanding byproduct of a mutually reinforcing complex, which includes global capital, real-time communication technologies,

military machines, and scientific research on the human. But such a critical stance on technology and time has come at the expense of thinking about the structural politics of time.

Like E.P. Thompson's thesis in *Time, Work, and Industrial Capitalism*, the new chronometers imposed by government and capitalist interests replaced earlier, collective perceptions of time that Thompson believed flowed from the collective wisdom of human societies. Theories of speed do imply a debt to Marx's formulation of the clock's production of socially necessary time, the quantification of work, and the production of value. Yet, the protagonists of speed theorist's stories are no longer the working classes or any subjugated population for that matter. Instead, the theory flies above the factories, call centers, and the other shadowy spaces of contemporary capitalism that are producing the very social experience of speed-up. The concern over time-scarcity, which as we know is also a hot topic with work–life balance coaches, distracts from a greater political engagement with time. Barely then does this theory address the institutionalization of the time they seem to be protecting. Work–Life balance as a concept already normalizes the institutional treatment of time and is an exclusive and inequitable temporal experience. Speed theorists, work–life-balance coaches, and marketers for new time-saving media-technologies draw upon the same fast-classed experience of time. This focus on pace and tempo occurs at the expense of those other necessary temporalities that produce this experience.

Innis' concern for the increasing pace of life and the downfall of civilization is shared by contemporary Speed Theorists.[6] But forgotten in the contemporary treatment of speed is Innis' important conceit, *the temporal* is political regardless of speed and present in any given media form. *The temporal* results from a material struggle over meaning, resources, and power. The temporal encompasses ways of knowing, social relations of power, discourses, and concrete infrastructures, such as transportation systems. One of Innis' most brilliant contributions was his insistence that power operates not only spatially and geopolitically, but also temporally. For Innis this is not a new condition resulting from speed but an enduring political and economic reality with important cultural effects. What we see with contemporary theorizing of speed and the public is something quite different. For media studies, time has rather suddenly become political *because of the force of speed*. For example, Virilio argues Geopolitics is supplanted by Chronopolitics. In other words, only today must we deal with a politics of time. This chronopolitical moment is dangerous for Virilio, as space is the ground of the political. Furthermore, Innis' attention to empirical detail and contextualization of technology as fostering specific temporal and spatial relations of dependence and marginality, the orchestration of a range of social relations, economic practices, and forms of knowledge, is precisely what is missing in contemporary theoretical incantations, "it changes space and time," "the world is getting faster," there are "new spaces," and these are "new times."

Power-chronography: coming to (new) terms with time

Media studies needs to rethink the temporal in terms of a structural politics of time. My introduction of Power-chronography to the field comes as an intervention to what I see as the ever-burgeoning critique of speed, our blind assumptions about a culture of acceleration, as well as theories of mobility and social space that have not politicized time. I am inspired and indebted to Doreen Massey's theory of power-geometry – a powerful intervention in cultural geography's treatment of time–space compression. Her work highlights a differentiated subjectivity within the social relations of time–space compression and mobility. Massey's work provides a consistent reminder of the geometries of power in social space, place making, and in practices of mobility. She argues, "different social groups have distinct relationships to this anyway differentiated mobility" (1994: 149). This attention to the geographies of difference provides an opening to consider the materiality of time as multiple and relational. Power-chronography examines more closely the structural politics of time *within* discourses and practices of speed rather than develops a politics of time in reaction to speed. Moreover, it recognizes that time politics are inherent in other categories of social difference, such as race, class, gender, and sexuality, thus making little sense to imagine that the politics of time is a new condition.

Power-chronography is a critical practice and theoretical approach to time that works to locate the normalizing temporal order maintained in claims about time as well as in cultural practices waged in the name of time control. I ask whose time, what time, and what kinds of time practices are elevated over others. Announcing epochal shifts with the coming of speed culture is a claim upon time that elevates certain bodies and practices over others. There is a privileged itinerary in the critical analysis – one that corresponds to the frequent business traveler and wealthy consumers of the latest gadget. Power-chronography detangles the interdependent and relational characteristics of temporal subjectivity. Power-chronography offers a pause, a temporary halt (Stuart Hall), into the temporal vicissitudes of contemporary power relations. Time is an arbiter of human worth, a structuring form of social difference. The social fabric consists of individuals whose sense of time and possibility are limited or expanded by the ways and means that they are in and out of time. Theorizing the temporal as a social relation of power means the intersecting moments of various social differences can be understood as part of a larger political economy of power. Power-chronography places emphasis on the temporal as a complex relation of power and thus problematizes appeals to singular media forms, as well as singular identity categories.

In what follows, I want to offer a quite truncated version of Power-chronography's scope for examining the temporal – a dynamic absolutely necessary to materialist approaches to media-technologies. I offer some new

terms: temporal infrastructure, temporal order, and temporal labor. I will touch on these very briefly below by showing how we might shift gears from the spatial treatment of time to power-chronography's temporal treatment of time.

The airplane is often cited as a time–space compressing machine within the literature on speed. At first glance, it is easy to conclude the airplane's speed is the yielding of space to time as it bridges geographic space in faster increments of time.[7] The airplane conquers the obstacles of space through time. From a power-chronographic perspective, focusing on the experience of travel only tells us what the airlines have promised. Air Canada tells us to "Defy obstacles," Delta promises "More space" while "Even Time Flies on Emirates" while you "Experience Waitlessness." Instead, we might see the compression of space and time as an aura produced by a material infrastructure of bodies, labor, and money. It occurs, not because of some metaphysical essence in the technological capabilities hardwired into jets, *but* because of the work that a range of bodies do on the tarmac and at airport hotels, in cockpits and cabins, at desks and over counters. Moreover, the airplane works in conjunction with other media-technologies, such as cell phones, trains, and in-cabin entertainment, including light therapy to alleviate tired bodies of the stress of jet lag. The message of the medium is not just speed and the loss of space, but the rise of a temporal infrastructure made up of the multiple temporalities of those who labor in relation to the plane; ground traffic control, security personnel, baggage loaders, taxi drivers, hotel maids, and flight attendants, to name a few. These populations undergo related shifts in their own experiences of space and time. Employing power-chronography forces us to acknowledge that this speed these theorists write of is actually produced by a multiplicity of unacknowledged temporalities that do not necessarily experience life as fast, or relate to time as a matter of balancing and control. And further, these populations have different horizons of political possibility tied to where they exist within a larger temporal order that runs deep in the social fabric.

For speed theorists, with their attention oriented on the jet-setting bodies' navigation of time, they can easily conclude this is an overworked and busy culture with everyone running on a treadmill going nowhere fast. In cultural theory, they are known by such monikers as "business tourist" (Virilio 2002), "global kinetic elite," "fast classer" (Armitage and Roberts 2003), and the "air miles traveling class" (Sassen 1998). But such a focus on this singular temporality espouses a depoliticized understanding of temporality. The only possibility in this critique is for time-starved subjects, the privileged purveyors of speed, to slow down, take time-out. The critique of speed implies that a change in pace would counter the effects of speed – fight tempo with tempo. But across corporate culture and consumer society this is precisely what is taking place. The discourse of being time-starved and out of time pervades contemporary culture in such a deep and persistent way.[8] Marketers depend on this same explanatory power of speed to

capture the contemporary moment while promoting novel ways to create more time. Only on the very surface of social experience and with a very particularly privileged population is speed an adequate descriptor of the contemporary moment. Power-chronography reorients the analysis.

Instead of speed, this is a culture over-invested in and subject to regimes for what I call temporalizing the self. Since you cannot tangibly create more time or reverse lost time, certain individuals are invited to at least attempt to decelerate and accelerate at will by exercising an otherwise unknown amount of time control. In this vein, the time-starved subject is a popular target market, which means it is an identity that is also constructed by the market in order to sell new products and techniques for living properly in these fast times. Time control can be bought at quickie mart – you want to speed up, drink Red Bull, you want to slow your roll drink DRANK, the first extreme relaxation drink on the market. The corporate rat racer, a favorite of the pharmaceutical industry can take stimulants to stay up for 48 hours. This pill has moved from the military to the general public – soldiers pop the same pill in their own version of the Darwinian struggle. Increasingly their managers insist they tuck into the office napping-pod for a productive snooze. The reality of an alienating vocation can be conquered by acquiring wellness at work or accepting your manager's offer of a Zen Warrior Worker course that will allow you to keep Irritable Desk Syndrome (IDS) at bay. If life feels fleeting, take it slow or hire a work–life balance coach.

To focus on the speed of life is to miss the significance of these practices. This is the construction of time-scarcity by dominant institutions actively working to create new forms of social control – including the normalizing of overwork by making it more palatable. Temporalizing the self tends to work best if one truly believes that things are speeding up. Feeling out of time, *certain* individuals are invited to recalibrate to fit into the various temporal demands of different institutions. Here bodies that are drifting, tired, and overworked, are retemporalized and reintegrated. The institutional arrangements that drain life will also provide the extra energy. The limits of individual bodies are overcome by introducing temporal enhancements in order to embrace, rather than reject, the institutional governance of time.

Power-chronography recognizes these examples as problematic not because of an apolitical tempo or depoliticized time but because these are technological solutions, corporate offerings, and new spheres of leisure indicative of a larger temporal infrastructure to reproduce normalizing and inequitable relationships of time. In this exertion of time control new forms of temporal difference arise, and old ones are exacerbated. A change in pace does not necessarily level temporal differences. Too often the belief that we are living in a dangerously sped up culture makes the demand for the labor of others justifiable as a systemic need *in these fast paced times* rather than the structurally excessive privilege that it is. *Who has time for that?* Speed as a universalized condition means that everyone can now be precarious, all

the while forgetting that the temporally precariat have long been so – the unpaid labor of women in the home, those without health insurance, and the imported domestic servants and housecleaners who have no rights to education, healthcare or other forms of social welfare.

Speed theorists might be right to point out that with fast capital everyone becomes time-starved. What they do not account for, however, is that not everyone is outside of the order of time in remotely the same way. Lines of temporal normalization are drawn throughout culture and work to maintain uneven temporalities. This operates discursively but also in the material relations of contemporary global capital. A particularly poignant example is an ad campaign I stumbled across in Manhattan a few years ago. A popular beer company launched an advertising campaign promoting "you know you need a drink when …" "You know you've been working too long if you know your office cleaning lady by name" was plastered all over Manhattan's streetscape below the skyscrapers that employee these very cleaning staffs and desk jockeys. While the ad might attest to being overworked and needing leisure, something not unique to the cultural dialogue about time, what is significant is that it speaks to the time of day for "other people" in a gendered, classed, and racist way. It attests to the prevalence of normalizing temporality – a time proper – within the greater cultural imaginary where business people work business hours and cleaning staff work around this schedule. These are two temporal routes that are supposed to remain indifferent and unrelated. It is assumed that they should not know each other, or interact. They share space but do not share time. In the end, it is the different ways these two figures occupy time that determines their social distance.

Uneven temporalities are sustained or exacerbated in individualistic attempts at gaining more time. And, relational temporal orders are drawn across distances as well. Seeking out the labor of others in different time zones is a key time-management strategy of survival in the United States. In the highly acclaimed "#1 Wall Street Journal Best Seller" *The 4 hour Work Week* the author instructs the self-enterprising subjects of an overdeveloped world how to outsource their life by hiring a remote personal assistant who works online from India. The delegation of life online is sold as a technological solution to save time. Companies such as "Your Man in India" offer overseas concierge services specifically for relocated Indian business classes who need property or family affairs managed in India while they are in the United States. Other companies, like Brickwork, offer remote assistants for a certain segment of self-enterprising subjects of neoliberalism within the United States and other western capitalist countries. Ferriss uses three different outsourcing services in India to manage his personal life, work life, and even his mental health. Asha, one of Ferriss' assistant's specific role is to take on his worry lists. He rejoices in her reply, "I will worry about this everyday … Do not worry." Ferriss maintains, "It's a strange feeling having people work for you while you sleep. Strange but Great … things are getting done" (Ferriss 2007: 116). There is a growing army of temporal reserve labor,

like Asha, spatially dispersed. Temporal labor is a term I use to describe labor that is oriented specifically to the maintenance of another's qualitative experience of time. These remote assistants are advertised as part of a technological solution to save time.

Conclusion

The 24-7-always-on-wherever-you-are-lnternet-world is a fantastical time claim, much like the space–time compressing airplane.[9] These remote assistants, I mentioned above, work within a similar temporal order already erected by Verizon, Cisco, Hewlett Packard, and Expedia. They are the e-versions of the sweatshop. They are employed by individuals with spatialized sense of time where being human now means one is a CEO of the self with a nonrelational sense of time and space. A growing army of entrepreneurs and intellectuals, whose itineraries are more important than their spatial locations, employ and make use of many undervalued bodies on the other side of the wires. These entrepreneurs of new time and new space rove with their blackberries imagining a world of global connection, which they control. But what they are orchestrating is the devalued labor and devalued time of others. We can notice the blackberry and iphone. How it enables people to work anywhere, anytime, and stay "connected." How it is a *new* time and *new* space for *new* communicative possibilities. We can also critique all this as indicative of more encroachment into our time and our space, the blurring lines between public and private, and then demand more time and more space. Or, we can think power-chronographically and examine what other itineraries are being gathered and reorchestrated in the tap, text, click, push, and point of our fingers.

Notes

1 I want to thank all of my graduate students at the University of North Carolina in my Spring 2010 Graduate Seminar in "Media Studies: The politics of space and time." A special thanks to Carey Hardin, Alex Ingersoll, Brett Lyszak, Dan Sutko, Armond Towns, Chung Kin Tsang, and Grover Wehman who have dropped by office with a range of space/time changers but whose work embodies attention to the other routes/paths/temporalities I am arguing for. I would also like to thank Jeremy Packer and Steve Wiley for their feedback. And, finally, to Myriam Bascunan-Wiley for making Raleigh writing days so much better.

2 See also, Berland, Jody 2009. *North of Empire* as well as the poststructural approach to media materialism found in the work by Sut Jhally 1993. "Communications and the Materialist Conception of History" and in Ian Angus 1998. "The Materiality of Expression: Harold Innis' Communication Theory and the Discursive Turn in the Human Sciences."

3 Lisa Parks, book chapter, Kinetic Screens in *Planet Television* is an instructive example of an approach to digital media and labor that forefronts marginalized relationships to technology. Likewise, Vicki Mayer's *Below The Line: Producers and Production Studies in the New Media Economy* Duke UP, 2011.

4 For example, see Ron Greene's Preface to the CSMC Special Issue on Spatial Materialism, 2010.
5 In anthropology, the anachronistic gaze of the ethnologist was problematized (Fabian). In, sociology, different uses of time as well as the hierarchies of temporal power between the time rich and the time poor were central (Barbara Adam, Murray Melbin, and Jeremy Rifkin). In political science, issues of the pace of the democratic process against the speed of life demanded a rethinking of the ability of our institutions of civil society to keep up and account for the tides of change (Scheuerman).
6 Innis argued that in order for a civilization to endure it had to maintain a balance between space and time. The introduction of a new media, by altering the space/time bias, would ultimately transform the culture; therefore it was necessary to maintain a sense of balance through homeostasis – wherein one media checks/offsets the next. For example, Innis argued that because the way the printing press was institutionalized in the United States, with a disregard for the necessary balance between space and time, the possibilities for homeostasis in the United States remained forever bleak (1951).
7 Virilio also argues that the airport represents a terrestrial city for the passenger, "the airport signifies the archeology of some future society, a society concentrated in the vector of transportation. Henceforth, the new capital is no longer a spatial capital (1999: 67)."
8 *Busy-ness* (2005), The online Journal *Fast Capital, No Time* (2005), and *24/7* (2007), *The Cultural of Speed* (2008), *The Cult of Efficiency* (2009), and *The Speed Handbook* (2009) are a few recent titles indicating the continuing explanatory power of speed.
9 Hassan, Robert, and Ronald E. Purser, eds. 2007. *24/7: Time and Temporality in the Network Society* reinforces the centrality of 24/7 to cultural theory.

References

Adam, Barbara. 1990. *Time and Social Theory*. Cambridge: Polity.
Adam, Barbara. 1995. *Timewatch: The Social Analysis of Time*. Cambridge: Polity.
Adam, Barbara. 2004. *Time*. London: Blackwell.
Angus, Ian. 1998. The Materiality of Expression: Harold Innis' Communication Theory and the Discursive Turn in the Human Sciences. *Canadian Journal of Communication*, Vol 23: No. 1, 1–15.
Armitage, John, and Joanne Roberts. 2003. *Living with Cyberspace: Technology and Society in the 21st Century*. New York: Continuum.
Berland, Jody. 2009. *North of Empire: Essays on the Cultural Technologies of Space*. Durham, NC: Duke University Press.
Ferriss, Timothy. 2007. *The 4-Hour Workweek: Escape 9-5, Live Anywhere, and Join the New Rich*. New York: Crown Publishers.
Greene, Ronald Walter. 2010. Spatial Materialism: Labor, Location, and Transnational Literacy. *Critical Studies in Media Communication*, Vol 27: No. 1, 105–110.
Hassan, Robert. 2003. *The Chronoscopic Society: Globalization, Time, and Knowledge in the Network Economy*. New York: Peter Lang.
Hassan, Robert, and Ronald E. Purser (eds.) 2007. *24/7: Time and Temporality in the Network Society*. Stanford, CA: Stanford University Press.
Innis, Harold A. 1951. *The Bias of Communication*. Toronto, Ontario: UP.
Innis, Harold A. 1971. *A History of the Canadian Pacific Railway*. Toronto, Ontario: UP.
Innis, Harold A. 1972a. *Empire and Communication*. Toronto, Ontario: UP.

Innis, Harold A. 1972b "The Problem of Space" in Drache (ed.). *Staples, Markets, and Cultural Change: Selected Essays Harold A. Innis*. Montreal: McGill UP.
Jhally, Sut. 1993. Communications and the Materialist Conception of History. *Continuum*, Vol 7: No. 1, 161–182.
Lipovetsky, Gilles. 2005. *Hypermodern Times*. Andrew Brown, trans. Malden, MA: Polity.
McLuhan, Marshall. 1964. *Understanding Media*. New York: McGraw Hill.
Massey, D. 1994. *Space, Place, and Gender.* Minneapolis, MN: University of Minnesota Press.
Mayer, Vicki. 2011. *Below the Line: Producers and Production Studies in the New Media Economy.* Durham, North Carolina: Duke UP.
Melbin, Murray. 1987. *Night as Frontier: Colonizing the World after Dark*. New York: Free Press.
Parks, Lisa. 2004. "Kinetic Screens" in Anna McCarthy and Nick Couldry (eds.). *MediaSpace*. Durham, North Carolina: Routledge.
Rifkin, Jeremy. 1987. *Time Wars: The Primary Conflict in Human History.* New York: Simon and Schuster.
Sassen, S. 1998. *Globalization and Its Discontents*. New York: New York Press.
Scheuerman, William. 2004. *Liberal Democracy and the Social Acceleration of Time*. Baltimore, MD: Johns Hopkins UP.
Scheuerman, William. 2005. Busyness and Citizenship. *Social Research*, Vol. 72: No. 2.
Stiegler, Bernard. 2009. *Technics and Time, 2: Disorientation*. Stephen Barker, trans. Stanford, CA: Stanford University Press.
Thompson, E.P. 1967. Time, Work, Discipline and Industrial Capitalism. *Past and Present*, Vol. 38, 56–97.
Tomlinson, John. 2007. *The Culture of Speed: The Coming of Immediacy.* Thousand Oaks, CA: Sage.
Virilio, Paul. 1986. *Speed and Politics*. Mark Polizzotti, trans. New York: Semiotext(e).
Virilio, Paul. 1999. *Politics of the Very Worst*. New York: Semiotext(e).
Virilio, Paul. 2002. *Crepuscular Dawn*. New York: Semiotext(e).

Chapter 5

Zeroing in

Overhead imagery, infrastructure ruins, and datalands in Afghanistan and Iraq

Lisa Parks

To "zero in" means to aim directly at a target, to direct one's attention to; focus on; concentrate on; to converge on; or close in on.[1] Zeroing in is an apt metaphor for the way citizen-viewers are positioned in relation to world events since they increasingly view them from the perspectives of militarized aerial and orbital machines. Such a claim is, of course, not new, and scholars such as Paul Virilio, Kevin Robins, and Jody Berland among others have explored how such aerial and orbital perspectives structure particular ways of engaging with the world.[2] What is new, however, is the frequency with which such overhead images now circulate in our global media culture. Once relegated to the TV weather report, such images have become commonplace in news media, and form the backbone of world browsers like Google Earth. This proliferation is related to a combination of factors from the commercialization of the remote sensing industry to the gradual transformation of the Internet into a location-based web 3.0.

With its increased accessibility, the overhead image has taken on heightened significance and functions in our media culture in a variety of ways. First, and perhaps most obviously, it has become the establishing or master shot for many mediated news events and, like the world map before it, is used to orient the viewer/user in a global/local space of coverage. Second, the overhead image activates a desire for what it is not – a close up – and triggers a demand for more local or embodied views in contrast to its remote and abstract perspectives. This desire is typically gratified through technique of the digital zoom. Third, the overhead image has been used as a visual gimmick by TV news producers who are desperate to attract eyeballs in the competitive multichannel environment. One of the most glaring attempts to use satellite images to reinvent news esthetics can be found in CNN's "magic wall."

Finally, and most germane to this essay, the overhead image, I want to suggest, serves as a symptom of practices of power that Rey Chow delineates in her recent book *The Age of the World Target*. Building on the work of Heidegger and Virilio, Chow suggests,

> … we may say that in the age of bombing, the world has also been transformed into – is essentially conceived and grasped as – a target. To conceive of the world as a target is to conceive of it as an object to be destroyed.[3]

Rather than simply correlate the power to see with the power to destroy, Chow moves subtly from a discussion of a Hiroshima mushroom cloud photo, which she sees as an iconic moment for imagining the world as target, and proceeds to describe and critique the emergence of "area studies" in academia, which developed after World War II in relation to US foreign policy, as a way of organizing and targeting the world for Western knowledge production. Chow defines the age of the world target as a time in which " . . . war and peace are coexisting, collaborative functions in the continuum of a virtualized world" and reminds us that, " … only the privileged nations of the world can afford to wage war and preach peace at one in the same time."[4]

Building on Chow's argument, I want to suggest that the overhead image is a particularly useful site for thinking through the idea of the world as a target, not only because of its strategic vantage point, but also because of its particular relation to knowledge practices and the materiality of communication. Technically speaking, the overhead image refers to image data that has been acquired by instruments onboard aircraft or satellites, downlinked to earth stations, rendered by computer software, and, in some cases, composited for the purpose of representing, viewing, and analyzing particular sites or activities on earth. The production of the overhead image is made possible by a vast and largely invisible communication infrastructure, which, I would argue, undergirds the capacity to imagine the world as a target. Aircraft, satellites, and the imagery they generate, are all used to guide missiles, coordinate movement, and reorganize capital. Their "views from above" can be useful platforms for thinking about the production of knowledge and the materiality of communication because they draw attention to such issues as the weaponization and commercialization of frames and perspectives, the transformation of sovereign territories into navigable digital domains, and the accumulation and circulation of new forms of intellectual property.

Further, the overhead image provides an opportunity to think about knowledge practices and the materiality of communication in ways that do not rely exclusively upon the visibility of bodies or frames as "purely representational." As I have argued elsewhere, satellite images can be used to bring (infra)structural processes and matters to the fore by intimating or revealing parts of systems or processes that are simply too vast for the frames, conventions, and capacities of modern media.[5] By using such views to zero in on the "infrastructural" we begin to notice that the materiality of communication is often designed to be invisible, whether submerged underground or underwater, blended in with the built environment, or situated beyond human perception. Perhaps ironically, then, the overhead image ultimately challenges us to recognize the limits of a "purely representational" frame.

The notion of the world target, the use of overhead imagery, and the question of infrastructure are all highly relevant to the US wars in Afghanistan and Iraq. In this essay, I use the term "zeroing in" to conceptualize a series of knowledge practices and material conditions that have taken shape in relation to overhead imagery of Afghanistan and Iraq. My discussion moves from an analysis of declassified US overhead imagery of bombed communication infrastructure in Afghanistan and Iraq to a consideration of the "shutter control rule," designed to limit access to high-resolution satellite imagery during times of war, and onto a discussion of the emergence of Google Earth and some of the controversies surrounding its use. In the process, I consider how overhead images simultaneously represent the world, or parts of it, as sites of scrutiny, destruction, and extraction. In other words, one overhead image may reveal a site to monitor, to destroy, and/or to develop (or redevelop). As this view figures the earth's surface as a target of observation, conquest, and development, it is commandeered in flexible economies of visual, military and corporate power, and in efforts to censor information and regulate interpretation. The destruction of communication infrastructure in Afghanistan and Iraq has occurred contemporaneously with the expansion of US satellite and aerial reconnaissance systems and global media platforms such as Google Earth, both of which have been used not only to document warfare in Afghanistan and Iraq but also to digitize and corporatize these countries' territories and model their futures.

Clear-cutting communication infrastructure

It is somewhat of a paradox that the first act of war when overthrowing authoritarian regimes with the intent to "democratize" them is the bombing of their communication infrastructures, especially given that parts of these systems have often been built with the aid, whether direct or indirect, of the US government or its allies. Nevertheless, the eradication of communication infrastructure has become a classic technique of modern warfare that has built within it the potential for the US government and multinational corporations to profit from the reconstruction of these systems during postwar periods.[6] US corporations have invested in the telecommunication and broadcast sectors of both Afghanistan and Iraq, annexing these territories into a US dominated global media economy. Such investments began even before the war started. As Michael Barker indicates,

> In Iraq the allocation of media reconstruction grants started early, and more than a week before the US officially started bombing Iraq, the Pentagon gave a $15 million contract to Science Applications International Corporation to revive Iraq's national broadcasting system and convert it into a Coalitional Provisional Authority administered Iraqi Media Network.[7]

As bombs fell from the skies to destroy communication systems in Afghanistan and Iraq, leaflets promoting the promise of new TV and radio

stations fluttered to the ground and civilians were targeted with information instructing them how and where to get their broadcast news from now on and directing them to coalition-run radio and television frequencies. One even addressed potential terrorists and featured a photo of a spy satellite reminding them, "We can see everything. Do not use nuclear, biological, or chemical weapons." Practices of leafleting and aircraft broadcasting were used to gradually transition viewers from systems of communication controlled by old regimes to *ad hoc* systems controlled by the US-led coalition. In addition to attacking the communication infrastructure and resources of the Taliban and Saddam Hussein, the United States declared all satellite uplinks in war zones military targets, and consequently attacked the stations of transnational media corporations (such as Al Jazeera and Abu Dhabi) as well as foreign journalists working at the Palestine Hotel in Baghdad.

After the attacks on the communication facilities of the Taliban and Saddam Hussein regimes, the Pentagon released declassified overhead images of destroyed communication facilities to confirm the hits. These images may not have the same kind of symbolic power as the toppling of Hussein's statue, but they serve a similar discursive function in that they allow the viewer to zero in on the damage done to old regimes. Some of these images appeared in military press conference briefings and television news reports. They also were archived in the Image Intelligence gallery of the Federation of American Scientists website and the GlobalSecurity.org website.[8] One dated October 10, 2001 shows a radio station in an unidentified location in Afghanistan. It features a compound inscribed with two yellow arrows pointing to charred areas on top of separate buildings. A second satellite image features one yellow arrow identifying a hit on a Taliban communications facility in Heart dated October 15. The arrow points to a dust bowl where nothing is left. Finally, another documents a strike on a Kabul RADCOM station dated October 22 and two yellow arrows identify the locations of facilities that appear to no longer exist.[9]

Similar satellite images of attacks on communication infrastructure in Iraq exist. Some of them were included in a National Security Archive report entitled "Eye on Saddam" published on April 30, 2003. The satellite images are not dated but presumably the data was acquired between March 20, 2003–April 30, 2003. One of the frames includes pre- and post-strike images with five blue arrows in the post-strike view indicating areas that had been hit (Figure 5.1). Several large dish receivers are visible as well as nearby buildings and a transmission tower. Neither the precise location of the site nor the date of the strike is specified. Pre- and post-strike satellite images of the regime command and control facility at Saddam International Airport were also released. The post-strike view features 26 blue arrows indicating different areas throughout the compound that have been hit (Figure 5.2).[10] Another post-strike image of a Command and Control Facility in Tikrit with four arrows pointing to sites in three different buildings that had been bombed.

Figure 5.1 US military intelligence image featuring pre- and post-strike views of an attack on a Television and Communications Facility in Iraq.

Source: These materials are reproduced from www.nsarchive.org with the permission of the National Security Archive.

While there is a long history of photo intelligence interpretation that involves training experts to read and interpret overhead images, such practices and the authority associated with them have been challenged as these images have circulated more widely in mass media culture.[11] These overhead images of Afghanistan and Iraq not only position the citizen-viewer quite literally as reading the earth's surface as a target but also they position others' communications networks as sites to be destroyed. Each of the images is inscribed with arrows that point to sites that have been hit. Here the act of guiding missiles to targets is transposed with guiding acts of interpretation. The images embed arrows to "direct the look" and thus their public release not only circulates information but also is designed to regulate interpretation. This attempt to control interpretation has the effect of restricting the interrogative mode, which, I have argued elsewhere, could be used productively in relation to the abstraction and remoteness of satellite imagery, to trigger further inquiry about the status of the image, the satellite that acquired the image data and the specificity of what lies below.[12] The arrows are positioned to allow an efficient or quick "read" and to lead the viewer to make rapid-fire assumptions about what the image represents. Such practices resonate with Nicholas Mirzoeff's discussion of the "weaponized image" – an image developed as a "carefully and precisely targeted

Figure 5.2 US military intelligence image featuring post-strike view of an attack on Saddam International Airport in Iraq.

Source: These materials are reproduced from www.nsarchive.org with the permission of the National Security Archive.

tool" that is "designed in itself to do psychic harm."[13] Mirzoeff's complaint was that during the Iraq war, "So many images were being created that there was never time to pause and discuss any one in particular."[14] Such declassified images should always be examined with close scrutiny and skepticism, especially given the ways they have historically been used by US officials for political gain.

Satellite images, are most useful when their abstraction compels closer engagement, critical inquiry, and self-reflexivity. For these overhead images reveal much more than the arrows suggest! We could add an arrow to the center of each of these images that points back at the sky, out to the object that lies at the end of the satellite image's reverse angle. This arrow would be placed, in other words, to direct attention to the satellites and orbital domains that have been organized to produce such a view in the first place. For what is effaced time and again in satellite images is the satellite itself. Thus the act of zeroing in on enemy targets on earth must be reversed so that when we look at satellite images, we also perform a conceptual look up and zero in on the satellite itself. In this case, such a look can be somewhat confounding since the satellites that acquire image data in the war theater

are often classified US military satellites. It is nearly impossible for civilians to identify which satellites acquired the image data in these orbital views. We do know, however, that the US Defense Department spends US $20 billion per year on its space programs and that there are an estimated 180 secret US reconnaissance satellites.[15] Some of them have in fact been photographed and "revealed" by amateur satellite photographers in Canada and Holland and by artist and experimental geographer Trevor Paglen in the United States. These photos of what Paglen calls the "Other Night Sky" serve as a crucial intervention that, among other things, sets out to visualize and publicize the secret technologies that US citizens subsidize yet are not supposed to know about.[16] Thus, even as these satellite images zero in on destroyed communication facilities on earth, they implicitly point us back to a secret and extensive system of global satellite reconnaissance in orbit. At the same time, they expose other structural patterns of modern warfare such as US strategies to clear-cut Afghani and Iraqi communication infrastructures and replace them with new ones that are built by US contractors and that conform to US technical standards, a pattern that played out during the recent war in Yugoslavia as well.

From shutter control to Google Earth

In 2000 the Departments of Commerce, State, Defense, Interior, and members of the Intelligence community signed an inter-agency memorandum called the Shutter Control Rule. The rule authorizes the US government to shut down US commercial remote sensing operators whenever national security concerns dictate, such as in time of armed conflict. This capability is deemed of great importance to military operations as it ensures that high-resolution imagery depicting US military maneuvers, facilities, and personnel locations will not be made available to the general public by US satellite operators.[17] Commercial remote sensing operators, journalists, and humanitarian organizations objected to the rule for various reasons. Satellite operators asserted that the conditions for implementation were vague, that there were no clear guidelines as to when shutter control may be invoked, and that the rules could damage the business of the remote sensing industry.[18] Journalists argued that shutter control violated the First Amendment of the US Constitution.[19] Early on Barbara Cochran, president of Radio Television News Directors Association, called the rule "unconstitutional, a violation of the First Amendment right of the press to publish or broadcast without government interference …"[20] She went on to argue that with the use of satellite images, "stories can be more accurate and truthful and can give the public access to geographic areas that are politically inaccessible or too expensive to get to."[21] Cochran further claimed that government exercise of shutter control "constitutes prior restraint of publication of the image" in that it was a government action that would prevent important communication from reaching the public.[22] Finally, humanitarian organizations that

use satellite images in relief efforts objected to the shutter control rule on the grounds that it would slow down the process of getting aid to those who need it.[23]

Given the various objections and the threat of constitutional litigation, the US government has been reticent to officially exercise shutter control. In October 2001, however, as the US military prepared to attack the Taliban in Afghanistan, a private Pentagon firm called the National Geospatial Intelligence Agency entered into a contract with Space Imaging Corporation that allowed the agency exclusive access to all of its Ikonos satellite imagery of Afghanistan. The US government paid US $2 million per month for 3 months of exclusive access to the imagery.[24] By purchasing exclusive rights of access to Ikonos images for a short term, the US government transformed shutter control into a financial transaction, and denied news agencies grounds to sue the federal government for violating the first amendment. This act of "checkbook shutter control" blocked news agencies and humanitarian organizations from accessing commercial satellite images of Afghanistan during the first three months of the war, whether to conduct independent investigations of war casualties, or to provide assistance to displaced persons and refugees throughout the region.[25]

After January 2002 when the exclusive licenses expired, Space Imaging made Ikonos satellite images of Afghanistan commercially available. And in a matter of years Afghanistan went from being a highly guarded and secured information space to one in which its territories, imaged from orbital and aerial platforms, suddenly became digitized lands for anyone to navigate. Indeed by 2005 the entire territory of Afghanistan was available as a composite of satellite and aerial imagery in Google Earth and had become datalands for sale. One contributor to these composites is the US company Digital Globe (DG), owner of the QuickBird satellite. DG licenses images to Google for use in the Google Earth database. The company also uses Google Earth as a platform for selling satellite images of Afghanistan (and other countries around the world) to private parties. At the interface, color-coded squares and DG icons appear in the visual field. The color-coded squares (sometimes called scene footprints) function as traces of a satellite's pass over a specific part of the earth. When composited, as in Figure 5.3, they form a historical record of satellite image data acquisitions, as well as a slice of DG's inventory. Clicking on a DG icon opens a frame with data about the image including the acquisition date, cloud cover, and an environmental quality rating. If the user clicks on "preview," she enters a meta-browser featuring the single satellite image captioned with information about how to purchase it or others from DG.

The United States may have restricted access to satellite imagery of Afghanistan for three months in 2001, but now it allows Google, DG, and Space Imaging to conduct an international business that turns Afghani and Iraqi territories (as well as those of other countries) into intellectual property produced, owned, and distributed by US corporations. This is symbolically

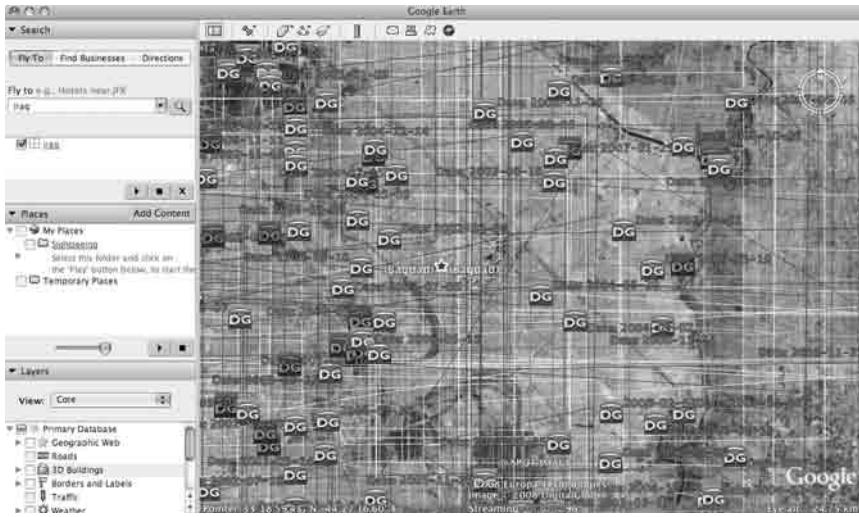

Figure 5.3 Screen capture of Google Earth revealing the landscape of Iraq as a digital, navigable landscape for (re)development or sale by companies such as DG and Google.

reinforced by the inscription of these companies' brand names within Google Earth's mediascapes. Just as the leveling of communication infrastructure provided opportunities for US contractors to restructure and rebuild Afghan and Iraqi broadcast and telecom systems, the Google Earthing of Afghanistan and Iraq boosts the business potentials and profits of US companies as the satellite image has been used both to showcase the eradication of Taliban and Hussein communication systems and as a platform upon which to imagine, design, and map new ones. This is vividly demonstrated by an Open Source Center layer called Media Mapping, Iraq, which uses Google Earth to visualize the plethora of television and news networks that have emerged in Iraq in the midst of the ongoing war, many of which are owned by foreigners. Interestingly, the introduction page to this layer warns that this map "is not intended for targeting. The accuracies of the project were created from coarse data."

In fact, other Google Earth images *have* been used for targeting by insurgents and terrorists. Since the application first emerged in 2005 leaders from the United Kingdom, Netherlands, Morocco, South Korea, India, Australia, and Israel among others have argued that these "interfaces to the planet" arouse serious concerns about national sovereignty and can be used by terrorists or others to organize attacks on facilities in their countries. For instance, Indian President A.P.J. Abdul Kalam complained that such open source intelligence is a problem for developing countries. He showed satellite and aerial images of sensitive sites in India available online to local police officers suggesting they could be used by terrorists or Pakistanis who have had tense

relations with India.[26] In 2005, Australian leaders complained that its Lucas Heights nuclear reactor and Garden Island military installation were visible and could be easily targeted by terrorists.[27] The South Korean government has indicated the locations of its military installations and the Presidential Blue House are identified in Google Earth and could be used by North Korea.[28] In the United States, state and federal officials make regular requests for certain areas to be censored and there are many areas that are blurred or covered with colored blocks.[29] In 2009, a California assemblyman introduced legislation designed to blur "soft targets" throughout the state including schools, hospitals, churches, and government buildings in an effort to protect them from "terrorists."[30] In response to such concerns, Google has censored certain facilities represented within Google Earth by blurring them.[31] The company has blurred sites in India, Kosovo, the Netherlands, and New York.[32] Shutter control thus has shifted from being a state decision to a financial transaction to a digital effect.

Despite this practice of blurring, Google Earth and Google Maps have been used by groups ranging from insurgents in Iraq to terrorists in Mumbai.[33] In January 2007 Iraqi insurgents allegedly used Google Earth printouts in an effort to orchestrate attacks on British coalition soldiers stationed in Basra. As the British *Telegraph* reported,

> Documents seized during raids on the homes of the insurgents … uncovered print-outs from photographs taken from Google. The satellite photographs show in detail the buildings inside the bases and vulnerable areas such as tented accommodation, lavatory blocks where lightly armored Land Rovers are parked.[34]

Amidst reports that Google Earth images were being sold to rogue militias at a market place in Basra, British soldiers said they would consider suing Google if injured by mortar rounds that had been directed on the camp because of Google Earth views.[35] Google responded to the incident by changing images of this area in the Google Earth database. These changes were discovered after a "forensic examination" conducted by Stefan Geens, who showed in the online journal *Ogle Earth* that Google replaced newer imagery showing impact craters and army installations with older ones pre-dating the war.[36]

Google claims that it avoids altering satellite images and alleges that this practice is conducted by satellite image companies before they are submitted to Google.[37] Yet in 2007 John Hanke, director of Google Earth and Maps explained,

> Google has engaged, and will continue to engage, in substantive dialogue with recognized security experts and relevant agencies worldwide. While we're unable to provide details of these discussions, the dialog may, in some rare cases, result in a change of image availability.[38]

Figure 5.4 Screen capture from Google Earth allegedly revealing three predator drones at a CIA base in Shamsi, Pakistan.

There have been so many Google Earth images "censored" that a user community has formed to track them and applies blue shading to highlight obscured areas.[39] Lists of censored sites also are available on wikipedia and they abound in the press.[40]

While it may seem that Google Earth's emergence conflicted with the logic of shutter control by making high-resolution satellite images available to the global public during a time of war, I want to suggest that Google's "patchwork censorship" represents the neoliberal outsourcing and digitization of shutter control and acts of state diplomacy. Now commercial satellite operators and Google engage directly with states and determine whether to quietly restrict access to or doctor satellite images in their possession. Because of the enormous volume of satellite image data in Google Earth, these censorship practices are often noticed only by chance or when there is a major news event. In February 2009, the politics of shutter control came full circle when a secret CIA base in Shamsi Pakistan reportedly being used to stage the monitoring and bombing of Al Qaeda targets near the Afghan Pakistan border was exposed in Google Earth (see Figure 5.4). The international community, and Pakistanis in particular, questioned the US government about the base, but received no confirmation and the satellite image was rapidly replaced.[41] Such are the practices of the age of the world target: when the CIA's military violence and Google Earth's digital "peacekeeping" are conducted collaboratively and in the window of a virtualized world.

Conclusion

I want to close with three points: First, for every satellite view we need to conceptualize or imagine a reverse shot that would lead us to the orbital location, history, ownership of the satellite that gathered the image data. This is a call for a vertical and techno-reflexive way of writing history and conducting analysis, one that accounts not only for players, events, and objects on earth but also for the multitude of powerful objects and operations that surround the planet and shape relations upon it, a call for greater critical awareness of the vertical space that stretches from the earth's surface, through the atmosphere and ionosphere, and into the low, medium, geostationary, and supersynchronous orbits that satellites occupy.

Second, the destruction of communication infrastructures is not only an attack on the central nervous system of authoritarian regimes; it is a bellwether for postwar nation-building projects engineered to support US economic and geopolitical interests. The satellite image provides a window onto such processes not just by spotlighting and confirming the moment of destruction but by challenging us to ask what will follow. That is to say, the satellite image intimates and anticipates futures as much as it reveals presents or pasts. Since it is also laden with strategic power, its use challenges us to look beyond the arrows of the Defense Department and continually ask how can satellite images be used to produce knowledge in ways that are not warfare's accomplice?

Finally, the politics of Google Earth are complex and the issues of sovereignty it raises date back further than the age of the Internet and relate to various international treaties and the legal definitions of the nation-state as well as extraterritorial domains such as the spectrum, the air, orbit, and the oceans. There is a long history of US attempts to assert ownership and control over these extraterritorial domains – and this is manifest in what I have discussed not only in its claims to restructure the electromagnetic spectrum of and for others but also in the process of using orbital space to turn the national territories of all countries, oceans, and skies into datalands either for sale or for censorship by US corporations. The political effects of Google's worlding maneuvers – a company's whose motto is "don't be evil" – are yet to be fully assessed. Suffice it to say that the power to represent the earth in this way is an enormous power that needs to be evaluated most carefully in the age of the world target – in a time where the United States exercises the privilege to wage war and preach peace at one in the same time.

Notes

1 These are verb phrases associated with "zero" listed at Dictionary.com, http://dictionary.reference.com/browse/zeroing+in, accessed April 6, 2011.

2 Paul Virilio, *Strategy of Deception* (London: Verso, 2001); Kevin Robins, *Into the Image: Culture and Politics in the Field of Vision* (London: Routledge, 1996); and Jody Berland, "Mapping Space," in *North of Empire* (Durham, NC: Duke University Press, 2009), 242–272.

3 Rey Chow, *The Age of the World Target: Self-Referentiality in War, Theory, and Comparative Work* (Durham, NC: Duke University Press, 2006), 31.
4 Ibid., 38.
5 Lisa Parks, "Digging into Google Earth: An Analysis of 'Crisis in Darfur,'" *Geoforum*, Vol. 40 (July 4, 2009): 535–545.
6 See, for instance, Michael Parenti, "The Rational Destruction of Yugoslavia," November 1999, www.michaelparenti.org/yugoslavia.html, accessed April 6, 2011; Parenti, *To Kill A Nation* (London: Verso, 2001); and Lisa Parks, "Postwar Footprints: Satellite and Wireless Stories in Slovenia and Croatia," in *B-Zone: Becoming Europe and Beyond*, Anselm Franke, ed. (Barcelona: Actar Press, 2005), 306–347.
7 Michael J. Barker, "Democracy or Polyarchy? US-funded Media Developments in Afghanistan and Iraq post 9/11," *Media, Culture and Society*, Vol. 30 (1): 109–130, 119.
8 See for instance overhead images of US attacks on Darunta Camp Complex here http://www.globalsecurity.org/military/world/afghanistan/darunta.htm, accessed April 12, 2011; and overhead images of US attacks on Bagram Airbase at http://www.globalsecurity.org/military/world/afghanistan/bagram-imagery.htm, accessed April 12, 2011.
9 These images are archived in the image intelligence gallery of the Federation of American Scientists, http://www.fas.org/irp/imint/afghan.htm, accessed July 5, 2005.
10 These images are included in this report: Jeffrey Richelson, ed., "*Eyes on Saddam: Overhead Imagery of Iraq*," National Security Archive Electronic Briefing Book No. 88, April 30, 2003, http://www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB88/, accessed April 12, 2011.
11 Histories of photo intelligence interpretation.
12 Lisa Parks, *Cultures in Orbit: Satellites and the Televisual* (Durham, NC: Duke University Press, 2005), 96–107.
13 Nicholas Mirzoeff, *Watching Babylon: The War in Iraq and Global Visual Culture*, (London: Routledge, 2005), 73–74.
14 Ibid., 74.
15 "US Pursuing New Spy Satellite Program," *Geopolitical Monitor*, December 3, 2007, http://www.geopoliticalmonitor.com/us-pursuing-new-spy-satellite-program-084/, accessed April 5, 2011. Need source for 180 satellites – Paglen's book.
16 Trevor Paglen, *The Other Night Sky art exhibition, Berkeley Art Museum*, 2008. Also see "The Other Night Sky," Trevor Paglen's website, http://www.paglen.com/pages/projects/other_night/index.html, accessed April 6, 2011.
17 Raphael Prober, "Shutter Control: Confronting Tomorrow's Technology with Yesterday's Regulations," *Journal of Law and Politics*, Spring 2003. Also see James Keeley and Robert Huebert, eds., *Commercial Satellite Imagery and United Nations Peacekeeping: A View From Above*, Ashgate, 2004.
18 For a broad discussion of the implications of shutter control see Ann M. Florini and Yahya Dehqanzada, "Commercial Satellite Imagery Comes of Age," *Issues in Science and Technology, 16.1*, Fall 1999, http://www.issues.org/16.1/florini.htm, accessed April 5, 2011.
19 Cheryl Arvidson, "Journalists denounce government 'shutter control' idea for satellite images," March 17, 2000, *The Freedom Forum Online*, http://www.freedomforum.org/templates/document.asp?documentID=11944, accessed April 6, 2011.
20 Barbara Cochran, "Fighting the Feds Over Shutter Control," *Communicator*, December 1999, 113–115, http://www.rtdna.org/pages/media_items/fighting-the-feds-over-shutter-control210.php, accessed July 3, 2008.

21 Ibid., 113.
22 Ibid., 113–115.
23 See Jessica Altschul, "*Commercial Satellite Imagery Poses a Challenge to Pentagon Planners*," February 28, 2002, GlobalSecurity.org website, http://www.globalsecurity.org/org/news/2002/020228-eye.htm, accessed April 6, 2011.
24 Joan Johnson-Freese, *Space as a Strategic Asset* (New York: Columbia University Press, 2007), 112.
25 Katherine Shrader, "Curbs on Satellite Photos May be Needed," *San Francisco Chronicle*, May 8, 2007, accessed July 3, 2008; David Corn, "Their Spy in the Sky," *The Nation*, November 8, 2001, http://www.thenation.com/doc/20011126/corn, accessed July 4, 2008. Duncan Campbell, "US Buys Up All Satellite War Images," *The Guardian*, October 17, 2001, http://www.guardian.co.uk/world/2001/oct/17/physicalsciences.afghanistan, accessed April 6, 2011.
26 Barry Levine, "Does Google Earth Reveal Military Secrets?" *News Factor Network*, June 27, 2006, http://www.globalsecurity.org/org/news/2006/060627-google-earth.htm, accessed April 6, 2011.
27 Karen Barlow, "Google Earth Prompts Security Fears," *ABC Online*, August 8, 2005, http://www.abc.net.au/news/indepth/featureitems/s1432602.htm, accessed July 3, 2008. Also see Jano Gibson, "Lucas Heights nervous about Google gander," *Sydney Morning Herald*, http://www.smh.com.au/news/technology/lucas-heights-nervous-about-google-gander/2005/08/08/1123353245458.html, accessed April 6, 2011.
28 "Google Earth Mapping Service Draws Complaint from South Korea," *The New York Times*, September 1, 2005, http://www.nytimes.com/2005/08/31/technology/31iht-google.html, accessed April 6, 2011; Lester Haines, "South Korea Throws Strop at Google Earth," *The Register*, August 31, 2005, http://www.theregister.co.uk/2005/08/31/google_earth_korea/, accessed April 6, 2011.
29 Verne Kopytoff, "Top Secret, in Plain View: Google Earth May blur the Image, but others don't," *San Francisco Chronicle*, May 18, 2007, http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2007/05/18/GOOGLE.TMP, accessed July 3, 2008.
30 Miguel Helft, "California Lawmaker Wants Online Map Images Blurred," *The New York Times*, March 3, 2009, http://bits.blogs.nytimes.com/2009/03/03/california-lawmaker-wants-online-map-images-blurred/, accessed April 6, 2011.
31 John Byrnes, "Google Increasingly Compliant with Censorship Requests: US Intelligence Report," *The Raw Story*, August 26, 2008, http://rawstory.com/news/2008/Google_Earth_compliant_with_government_requests_0826.html, accessed April 6, 2011.
32 "Google Earth to Blur Key India Sites," *SpaceDaily.com*, February 4, 2007, http://www.spacedaily.com/reports/Google_Earth_To_Blur_Key_India_Sites_999.html, accessed April 6, 2011. Philip Lenssen, "Google to Censor India Satellite Imagery," *blogoscoped.com*, February 4, 2007, http://blogoscoped.com/archive/2007-02-04-n63.html. Also see Frank Patalong, "Das zensierte Weltauge," *Spiegel.online*, February 4, 2007, http://www.spiegel.de/netzwelt/web/0,1518,464186,00.html, accessed April 6, 2011.
33 Damien McElroy, "Mumbai Attacks: Surviving Terrorist says he Belonged to Pakistan Militant Group," *The Telegraph*, November 30, 2008, http://www.telegraph.co.uk/news/worldnews/asia/india/3537203/Mumbai-attacks-surviving-terrorist-says-he-belonged-to-Pakistan-militant-group.html, accessed April 6, 2011.
34 Thomas Harding, "Terrorists Use Google Maps to Hit UK Troops," *The Telegraph*, January 13, 2007, www.telegraph.co.uk/news/worldnews/1539401/Terrorists-%27use-Google-maps-to-hit-UK-troops%27.html, accessed July 1,

2008; "Google Earth, Insurgents' Friend?" defensetech.org, January 13, 2007, www.defensetech.org/archives/003163.html, accessed July 1, 2008.

35 Thomas Harding, "Terrorists Use Google Maps to Hit UK Troops," *The Telegraph*, January 13, 2007, www.telegraph.co.uk/news/worldnews/1539401/Terrorists-%27use-Google-maps-to-hit-UK-troops%27.html, accessed July 1, 2008. There were also reports that the GE images were being sold to rogue militias at a market place in Basra.

36 Stefan Geens, "Did Google Censor Basra Imagery?" *Ogle Earth*, January 14, 2007, www.ogleearth.com/2007/01/did_google_cens.html, accessed July 1, 2008. For further challenges to the Daily Telegraph report see Stefan Geens, "Basra: Daily Telegraph has no clue," *Ogle Earth*, January 20, 2007, http://ogleearth.com/2007/01/basra-new-daily-telegraph-article-has-no-clue/, accessed April 6, 2011; also see Noel Jenkins, "Terrorists read Ogle Earth not the Daily Telegraph," Juicy Geography's Google Earth Blog, January 14, 2007, www.juicygeography.co.uk/blog/?p=99, accessed July 1, 2008.

37 http://www.slate.com/id/2205755/

38 Verne Kopytoff, "Top Secret, in Plain View: Google Earth May blur the Image, but others don't," *San Francisco Chronicle*, May 18, 2007, http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2007/05/18/GOOGLE.TMP, accessed July 3, 2008.

39 Verne Kopytoff, "Top Secret, in Plain View: Google Earth May Blur the Image, but Others don't," *San Francisco Chronicle*, May 18, 2007, www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2007/05/18/GOOGLE.TMP, accessed July 3, 2008.

40 See "Satellite Map Images with Missing or Unclear Data," *Wikipedia*, http://en.wikipedia.org/wiki/Satellite_map_images_with_missing_or_unclear_data, accessed April 12, 2011; or "Google Earth Cool Places – Censored Stuff," http://www.googleearthcoolplaces.com/censored.php, accessed April 11, 2011.

41 Jeremy Page, "Google Earth Reveals Secret History of US Base in Pakistan," *The Times*, February 19, 2009, http://www.timesonline.co.uk/tol/news/world/asia/article5762371.ece, accessed April 11, 2011.

Chapter 6

Rhetoric, materiality, and US Western Front commemoration

V. William Balthrop, Carole Blair, and Neil Michel

> The memorialization of the Western Front was one of the most extraordinary periods of landscape creation in modern memory.
>
> (Heffernan, 1995: 311)

Heffernan's observation serves as our point of departure in accessing the modes by which interwar US memorialization on the Western Front was produced and how it has been continually reproduced. The invented landscape Heffernan marks is not just a periodized memorial production; it is an assemblage of commemorative places *always being* produced. Thus, we take particular US locations on the Western Front as exemplars of practiced, rhetorical memory places (Blair *et al*., 2010: 22–32).

Rhetoricians, like other communication scholars, have theorized materiality in various ways. These include, but are not limited to, considerations of rhetorical praxis: (1) in relation to the body; (2) as itself material, *and as* a response to material conditions; (3) as differentially material, because of its specific modes of mediation; and (4) as consequential not only in the sense of mediating cultural identities and/or political economic conditions, but also in terms of its various modes of effectivity.[1] This chapter intersects these possibilities by attending to interventions in a particular space in different times that invented and continue to reinvent American commemoration in Europe. The Western Front, once a largely agricultural and industrial space, was transformed by World War I (WWI) into a space of mass death and ground obliteration. After the war, it was remade as again industrial and agricultural, but also as an international commemorative space that accommodates, *and* that is constantly changed by, tourism, rituals and spectacles of remembrance, political and military actions, and so on. Our focus here is the interwar invention of the space as commemorative and its reinvention through time, focusing especially upon US memory places within the international context of commemoration on the Front.

Place – especially memory place – is often thought of as bordered, unchanging, exclusionary, and predicated in some sense of stable, "authentic" community (Cresswell, 2004: 26). An exemplar of this view is Nora's distinction between *milieux* and *lieux de mémoire* (1989: 7): a *milieu* represents a kind

of "natural" habitat of memory, while a *lieu de mémoire* (memory place) is an artificial trace of the lost milieu, in an age of "globalisation, democratisation, massification, and mediatisation" (Carrier, 2000: 41). However, like many geographers and other rhetoricians (Stewart and Dickinson, 2008; Zagacki and Gallagher, 2009), we see place instead as practiced and produced; characterized by openness and change; and its borders, character, and "authenticity" as rhetorical effects. Massey's notion of trajectories that produce and reproduce place (in the sense of remaking rather than replication) is more aligned with our position. She argues that place should be conceived as an event, as "open and as internally multiple" (2005: 141). She suggests, furthermore, that: "In sharp contrast to the view of place as settled and pregiven, with a coherence only to be disturbed by 'external' forces, places as presented here in a sense necessitate *invention*; they pose a challenge … " (ibid.). Massey invites us to think of places as always under construction, as spheres of heterogeneous trajectories, or "stories-so-far" (ibid.: 9).

Massey's understanding of place is consonant with many understandings of public memory production; for example, Graham describes relations to the past as inescapably and "essentially transient" constructions that reflect the "particular time and place of their genesis," but that become for future generations resources of new interpretations (1998: 23). These positions suggest a bond with rhetoric, understood materially. It was through the rhetorical invention and reinvention (otherwise put, through the negotiation of sometimes contradictory trajectories), that the commemorative sites of the Western Front were established *and* have changed over time. As Blair *et al*. suggest, "memory places themselves have histories … [T]hey do not just *represent* the past. They *accrete* their own pasts" (2010: 30).

WWI was the most destructive conflict in history to that time. Along a front of trenches that reached 400 miles, from the ports of Belgium and France to Switzerland, the damage was unprecedented and devastating (Thrift, 1983: 18). Demangeon described in 1920, a "zone of death … in which good land had been transformed into a desert, a wild steppe, where the fields have erupted, … wherever the 'cyclone' had passed" (quoted by Clout, 1996: 3–4). In France, the devastated region was "more than twice the size of Wales or Massachusetts" (Kramer, 2007: 314). The human toll was even more staggering, with almost 9 million war dead and approximately 5 million civilian deaths (Kramer, 2007: 251).

In addition to issues of restoring the destroyed landscape, the questions that confronted all combatant nations were: What do we do with the bodies, and how do we prevent this from ever happening again? These questions were answered by what Smith describes as a territorialization of memory, "the creation of a field or zone of powerful … attachments" (2003: 134). Hundreds of monuments and military cemeteries – French, British (Empire), Belgian, German, Portuguese, Italian, Russian, and American – were constructed alongside and coincident with the rebuilding and/or relocation of factories, farms, homes, and villages, during the interwar period.

Figure 6.1 American monument at Montsec near St. Mihiel. Photo by authors.

The American commemorative program for WWI consists of 8 cemeteries and 14 monuments. Six cemeteries are located in France and Belgium where US troops saw combat; the others are in suburbs of Paris (Suresnes) and London (Brookwood).[2] The monuments include large structures at Montfaucon, Château-Thierry, and Montsec recognizing the most significant operations by the American Expeditionary Force (Figure 6.1), a large monument overlooking the harbor at Brest marking the debarkation of troops, and ten others ranging in size from a moderately sized tower at Sommepy to a small bronze plaque identifying first Army headquarters at Souilly. This program was not invented by some unitary, singular process or group. It was the result of a convergence of a large number of trajectories: the character of the war, considerations of precedent military commemoration, changing objectives on the part of US officials, differing priorities and preferences of government agencies, demands made by US citizens, responses to other nations' commemorative plans, and so on.

The task of physically marking the actions of US forces was given to the Battle Monuments Board, created in June 1921, by order of the War Department. Later that year, the Board approved the following principles: First, the

> work of [the] board [is] to be done with a view to commemorating the services of soldiers and to give information to tourists – not to

> emphasize the part of the United States in the War. This principle requires a modest view on all questions of achievement.

Second, "all work [is] to be of [the] highest standard. A few monuments well executed are far better than a large number done in a mediocre way. Monuments must properly represent the United States – be perfect in all respects" (Battle Monuments Board, 1921: 1). These principles arose from growing concern about the number of unofficial (and rudimentary) monuments left by departing military units, erected without any authority, on ground they did not own, and for which there was no provision of future maintenance. The War Department was determined too that any representations of US military action would be historically accurate, something it feared would not occur with nonfederal monuments.

The Board was entering unknown territory when it began its work, and it turned to the only readily available precedent for military memorials: the US Civil War. A delegation of the Board traveled to the Antietam Battlefield and recommended particular styles of relief maps and pedestals, like some they found there. Their recommendations were approved at the Board's second meeting and established the foundation for the memorials project. The result was a plan to place over 150 bronze relief map monuments along the Front (House of Representatives, 1922: 10). By 1922, the justifications for commemorating the American presence had expanded. As Secretary of War John Weeks wrote to the Director of the Bureau of the Budget:

> We would like to have our part in the World War definitely understood not only by our own people but by foreigners who visit the battlefields … From an international point of view these monuments, which will be scattered along the northeastern part of France from the North Sea to Switzerland, will be very beneficial in tightening the bond of friendship between the United States and France.
>
> (House of Representatives, 1922: 4)

The Civil War's influence extended far beyond the relief maps; the Union's practice of honoring each individual soldier sacrificed in the war was copied by other WWI combatants as well as the United States. In previous wars, nations had buried their dead in mass graves, with individual burials and markers reserved only for prominent men. Following the US Civil War, however, there were pressures to identify and bury individual remains when possible and to honor the missing. From the first engagements of WWI, French, British, and German armies established units "to register individual graves and the names of the dead and to keep lists" (Mosse, 1990: 81); the United States followed suit after its entry in 1917.

Germany and Britain adopted policies of no repatriation, for quite different reasons, while the French, and later the Americans, allowed families to reclaim the bodies with costs of relocation borne by the governments. Repatriation of American bodies was originally opposed by War Department officials, who believed that the presence of cemeteries would serve as a perpetual reminder to Europeans of the sacrifice made by the United States (Budreau, 2010: 36). Domestic political pressure, however, forced the government to allow families the choice of leaving their loved ones in Europe or repatriating them for burial (Sledge, 2005: 136).

In 1923, the Battle Monuments Board was transformed into the American Battle Monuments Commission (ABMC), an independent agency reporting to the President. The ABMC – chaired by General John J. Pershing – negotiated with the French and Belgian governments for appropriate cemetery and monument sites. It prohibited all nonfederal memorials except those granted approval by the Commission. But it had come to recognize the difficulty of placing so many memorials on French and Belgian soil and sought alternatives to the relief maps plan. Following meetings with the British Imperial War Graves Commission (IWGC) in 1924, ABMC commissioners realized the scope of British commemorative efforts, which included hundreds of cemeteries (ranging in size from a few dozen to more than 11,000 burials at Étaples, France) and two giant monuments to the missing in Ypres, Belgium (the Menin Gate) and at Thiepval, France.

The ABMC's concerns about its planned number of relief maps and about the size of Britain's commemorative project were to have major influence on the final design for American commemoration in Europe. Instead of more than 150, 14 monuments were constructed; they contained maps but bore little resemblance to the earlier plan. The ABMC took British plans into consideration in decisions about consolidation, location, and enhancements of US cemeteries. The cemetery sites – consolidated to eight from as many as 2,000 temporary burial sites – were selected on the basis of the following: distributions of American casualties, proximity to battlefields, and capacity to render clear statements about the United States' role in the war and its new standing as an international power. In both the Somme and Flanders areas, the US presence was small compared to the French and British. Nevertheless, the ABMC wanted to make sure that the role played by the AEF was clearly visible; hence its decisions to build fewer but much larger cemeteries in regions likely to receive the greatest number of international battlefield tourists.

The Battle Monuments Board and ABMC were not the only US groups involved in the commemorative program, and occasionally different priorities and goals among collectives gave rise to conflicts, but also to distinctive resolutions. The Fine Arts Commission (FAC) worked with the War Department and Graves Registration Service to design the permanent

cemeteries. The FAC, borrowing from the Civil War precedent, proposed that uniform headstones patterned after those in the older sections of Arlington National Cemetery be used in the cemeteries. Public pressure emerged almost immediately, however, to retain the white cross (albeit in a more permanent form) that had marked the temporary graves, press photos of which had been widely circulated.

The public pressure for the cross was successful, and Paul Cret, consulting architect for ABMC, designed a Latinate cross and a Star of David for those of the Jewish faith. The markers were to be carved from Carrara marble and inscribed with each serviceman's name, rank, unit, date of death, and home state or territory. The headstones for those whose remains were unidentified were inscribed with the phrase, "Here rests in honored glory an American Soldier known but to God." The use of the cross, simply modified for Jewish soldier dead,

> indicates the degree to which many Americans, particularly many national elites, considered the United States a Christian nation. It also suggests a great deal about how they viewed the war. Although the cross signified the promise of resurrection in the Christian tradition, it also stood for suffering and sacrifice; by adopting it, Americans declared symbolically that the war dead had offered their lives in order to redeem the nation.
>
> (Piehler, 1994: 169)

Clearly, the cemeteries were intended to make a series of claims to different audiences. First, as Piehler notes,

> American leaders looked to make the war dead a central symbol of national identity divorced from the often divisive ties of class, ethnicity, religion, and region. Moreover, they wanted the commemoration of the fallen to exemplify the willingness of males to serve and die for their country.

Additionally, the construction projects "would reflect the power and prestige of the United States" (Piehler, 1994: 169). As Charles Moore, chair of the FAC, wrote, the cemeteries would express "American participation in the war for civilization." He maintained that

> England was to have one thousand cemeteries over there in France … How many France has we do not know. There are a great many German cemeteries … Now we are going to have six (in France) and unless we make those cemeteries "little Arlington" [sic] no one will know that the American troops fought in France. We must have something more than a patch of white.
>
> (quoted by Grossman, 1984: 120) (see Figure 6.2)

Figure 6.2 Suresnes American Cemetery. Photo by authors.

To honor the American dead and to convey that sense of power and prestige, most of the cemetery chapels would contain a map that outlined offensive operations in the immediate area where most of those buried in the cemeteries had fought, and a reception area to meet visitors. Maps, both in the cemeteries and at the monuments, reflected the original plan developed by the Board. Additionally, no doubt influenced by the British efforts in Ypres and Thiepval, the ABMC inscribed the names of those whose bodies were not found or not identified on the inside walls of the chapels. Although the British, French, and Germans all had more dead than the Americans, the Americans compensated by having more extensive, park-like landscapes to indicate that the dead were provided with a lasting peace. Headstones were placed farther apart than in other countries' cemeteries to convey a sense of spaciousness and wealth (see Figure 6.3). Meyer noted that, "The overall effect is one of quiet dignity matched with a combination of cultured taste and implied wealth and power – precisely the qualities envisioned and sought after by those who originally designed these landscapes" (2001: 224). Locals clearly noticed too: "When you see the admirable cemetery for 25,000 Americans at Romagne," an observer told the [French] national commission, "you will want us to have comparable ones wherever our sons distinguished themselves" (Sherman, 1999: 79).

An important objective for the American commemorative program was to represent the character of the nation state, including its valuing of equality and Christianity. Officers were buried alongside the men they commanded,

Figure 6.3 Meusse-Argonne American Cemetery (left); British Cemetery at Tyne Cot (right). Photos by authors.

and all were commemorated by identical headstones. And, in a particularly striking departure from prevailing social attitudes in the United States and from customary practice in American cemeteries, the decision was made to bury the dead together without consideration of race. If the headstones – a large majority of which were crosses – indicated the overwhelmingly Christian character of the nation, the chapels made that statement even more strongly. From the beginning, the ABMC directed the architects that they were to be "nondenominational" yet be "Christian in character" (Budreau, 2010: 124).

In selecting architects to design the cemeteries, the FAC and the ABMC turned to prominent artists trained in classicism. Paul Cret, the ABMC's consulting architect, believed that the classical design of monuments and chapels could help to "assure the continuity of history across the rupture of the First World War" (Grossman, 1984: 139). As Sherman observes, the invocation of past styles "constructed a lineage, or in Foucauldian terms a descent, encompassing the soldiers of World War I and by implication extending into the future" (1999: 96). The act of commemoration, then, became liminal, marking connections as well as transitions, seeking to overcome WWI's cultural disruptions and threatened destabilization, while pointing toward new possibilities. The cemeteries and monuments themselves indicated a different and changing world, wherein the United States displayed its role as an international power on the very ground of Europe.

These commemorative sites changed the material landscapes as they turned ground that had been devastated by war into park-like settings honoring the nation and its soldiers. They also changed the trajectories and the stories that could be told and lessons learned. Although initial visitors were fascinated by scenes of destruction,

> Reconstruction removed much of the devastation and most of the wartime aspect of the battlefields. The objective of travel shifted to the few

> remaining battlefield sites and to the cemeteries and memorials built by the Allies. The imagined landscape was increasingly perceived within the context of the wider meaning of the war for travellers. This meaning fluctuated between an appreciation of the heroism of and the sacrifice made by the men and concern that the horrors of war needed to be remembered and avoided.
>
> (Lloyd, 1998: 114)

These commemorative sites were clearly conceptualized in the interwar period as "national" or "imperial." Yet, that claim, too, must be tempered with the consideration of other forces at work. From the time of early battlefield tours and pilgrimage that allowed visitors both to witness the destruction of war and to pay respects to their loved ones, the landscape changed. Throughout the 1920s and 1930s, another undercurrent began to gain credence, that these "sights [sic] provided a lesson in the horrors of war and the need to work for peace" (Lloyd, 1998: 127). The memory of the dead was invoked to assure that such a war would, indeed, be the "war to end all wars." Sir Fabian Ware, head of the IWGC,

> wrote that pilgrims … returned with a message from the million dead to future generations, and particularly to the statesmen of Great Britain, France and Germany: "You have failed to achieve your ends by other means than war and we have expiated your failure – fail not again, accept our atonement and give new faith and life to the world."
>
> (Lloyd, 1998: 177)

The US monuments and cemeteries are not the same places as in the interwar period; they have been changed by the interventions of subsequent events' appropriations of the sites. While the goals for which they were established still have force – to remind host nations of the sacrifices made by Americans, to honor those who died, and to represent American values to visitors – the ways those are accomplished have changed because of *reinvention* of the sites, frequently by interventions of those other than the US government. The most significant intervention that changed the commemorative places was World War II (WWII). Some of the cemeteries experienced damage from shelling and vandalism by German forces, most visible now in the shell hole in the front of the chapel at the Aisne-Marne American Cemetery (Figure 6.4).

WWII had an even more destructive effect in Brest. The monument erected there to recognize WWI debarkation sites was destroyed by German forces on July 1, 1941, well before the United States' entry into the hostilities. Following the war, the monument was rebuilt to specification, but with additional information explaining the destruction and reconstruction. The

Figure 6.4 Shell hole in chapel at Aisne-Marne American Cemetery. Photo by authors.

monument is now seen by most people in Brest, a city leveled by fighting in 1944, as a monument to WWII as well as WWI (Figure 6.5).

Some US cemeteries were appropriated during WWII by local citizens as sites of resistance. After the Nazis occupied Paris in June 1940, only four visitors to Suresnes signed the guest book there, until May 30, 1941. On that US Memorial Day, 11 people signed the guest book, listing their addresses as Suresnes, neighboring Saint Cloud, or Paris. No further visits were recorded except on Memorial Days in 1942, 1943, and 1944. The subsequent signatures were recorded on August 28, 1944, three days after Paris was liberated. The Memorial Day visits transformed the cemetery's rhetoric into one of defiance. Making this use of the cemetery all the more remarkable is its location at the base of Fort du Mont Valérien, where members of the French resistance were executed regularly by German forces. At the St. Mihiel American Cemetery, guest book entries as early as May and June 1943 linked France with the United States and England: "Vive la France"; "Vive l'Amerique et l'Angleterre"; and "Hommage aux soldats americains." By January 1944, the tone had shifted, anticipating liberation ("Attendons votre retour avec impatience") and praising Allied forces ("Vive les alliés et la libération"). Not as overtly dangerous a place as Suresnes, such comments still could have had very serious consequences for their writers at St. Mihiel.

Figure 6.5 American monument at Brest. Photo by authors.

The Suresnes and Oise-Aisne cemeteries carry traces of official postwar decisions that changed the sites profoundly. At Suresnes, the decision was made to bury 24 unknown soldiers from WWII among those from WWI, so that ceremonies held on US Memorial Days could honor American dead from both wars and would take advantage of the cemetery's location near Paris. The 24 unknowns, moved to Suresnes from the battlegrounds of Normandy, are buried in a special plot, their graves laid out in the form of a Latinate cross (Amen, 1949: 1). Additionally, two logia were added to the central chapel at Suresnes, to commemorate the dead from each war.

The decision making was very different at Oise-Aisne. During WWI, US soldiers executed for criminal acts were buried among their compatriots with no indication of their ignoble ends. In WWII, the US government decided that that war's "dishonored dead" should not be buried in the regular grave plots. They were interred in Oise-Aisne American Cemetery's new "Plot E," located in a secluded area behind the superintendent's quarters, in 94 graves marked only with small, flat, numbered plaques. Plot E remade Oise-Aisne as a cemetery for both world wars, but it introduced an unsavory rhetorical tonality to the place, because of the secretive way in which it was sited and treated by US officials.

Official US decisions may change these places, but so do the uses visitors and host countries make of them. They have been used as spaces of quiet but sometimes articulate protest on current issues. Although a majority of

guest book comments through the years have read like thank you notes for the liberation of Europe, some comments have been quite critical of the United States, especially in times of international discord, like the run-up to the Iraq war in 2003. Visitors also use the sites as means to express international amity. Immediately after September 11, 2001, guest book condolences were legion. The cemeteries and monuments became sites of spontaneous shrines for the victims in the US. People left letters, cards, flowers, school drawings, and so on offering comfort and pledging solidarity – usually accompanied by an analog to one or both of the world wars in terms of international alliance.

Other trajectories both reify and remake the claims advanced by the commemorative programs. In many respects, visitors to the sites have engaged with them in ways that affirmed the original goals of their designers. Not only does the presence of others at a cemetery or memorial reproduce the site's claim of national significance, but so do the rituals that visitors have developed and continue to perform there, such as placing floral bouquets at the headstones of distant relatives or attending ceremonies honoring American dead from all wars on Memorial Day.

Other interventions by visitors remake these trajectories in quite different ways. A poem left by a visitor at an American Medal of Honor recipient's headstone speaks to the original desire to honor the American dead. But that same poem, found later at the headstone of a German soldier also attests eloquently to the sacrifice of youth, in a way that underscores the international connections among commemorative sites and undercuts an overtly nationalist reading; there is more than a suggestion here of a different public and a different memory. Thus, "the uses to which visitors put memorial sites make, remake, and unmake the imposed structures of power" (Blair *et al.*, 2010: 29). The presence of memory sites of the various combatant nations reinforces the impression of shared loss and the devastation of war, transcending the national imperative. They work to create different publics where the collective story becomes not one of national pride – although that certainly exists – but a reconstituted international public that vows such carnage must never happen again (Graham, 1998: 44).

American commemorative sites are also used as stages for enactments of the past. During the Meuse Departement's 2008 recognition of the 90th anniversary of WWI's end, the monument at Montfaucon served as the final stop on a 100-kilometer "*illumination*," a marathon that wound its way through villages liberated by American forces during the St. Mihiel and Meuse-Argonne offensives. Volunteers from local police brigades carried a torch lit at the St. Mihiel cemetery on the overnight run, stopping at the local villages for a brief ceremony. The final ceremonies at Montfaucon included commemoration of the liberation by American forces, accompanied by an honor guard of re-enactors performing French *poilus* and American "sammies." A similarly purposed appropriation took place at the Montfaucon monument on two weekends during September

and October 2008. A sound-and-light show was staged there recounting a history of the village of Montfaucon, focusing on its devastation in WWI and its subsequent liberation by US forces, and later its liberation during WWII, again by US soldiers. More than 600 local citizens participated as actors, with another 600 providing food, security, and support services. Such events at Montfaucon, and other American monuments, continue to perform – and cement – international alliance and amity.

Most of the devastated Western Front has been reclaimed to productive life. The visits of next-of-kin to commemorative sites are fewer than in the past, and those who visit are of different generations. There are still pilgrimages, but they are of a quite different kind. Tourists keep coming, often by the bus load, seeking not to mourn but to reap in some way an "experience" of WWI. The cemeteries and monuments still do powerful rhetorical work, but they have been changed in important ways because of official augmentations, uses to which they are put by tourists, and subsequent events that have left important traces. They, like all memory places, cannot remain the same, because of the inevitable trajectories that remediate them.

Notes

1 Blair *et al*. define rhetoric as "the study of discourses, events, objects, and practices that attends to their character as meaningful, legible, partisan … consequential, [and crucially marked by contestable] ideas about what it means to be 'public'" (2010: 2–3). For a sense of different understandings of how materiality has been approached in rhetoric, see Biesecker and Lucaites (2009).

2 The cemeteries are named by location, for example, Brookwood, Flanders Field, Meuse-Argonne, Somme, Suresnes, and St. Mihiel.

References

Amen, M. (1949, March 1) "*Operations Instructions Number 18, Burial of World War II Dead in World War I Cemetery, Suresnes, France*," Records of the American Battle Monuments Commission, RG 117, WW I Cemetery Files, Box 42. U.S. National Archives and Records Administration.

Battle Monuments Board. (1921, September 21) "*Board for Marking the Battlefields of Europe*," Records of the Battle Monuments Board, RG 117, Box 1. U.S. National Archives and Records Administration.

Biesecker, B.A., and Lucaites, J.L., eds. (2009) *Rhetoric, Materiality, & Politics*, New York: Peter Lang.

Blair, C., Dickinson, G., and Ott, B.L. (2010) "Rhetoric/Memory/Place," in G. Dickinson, C. Blair, and B.L. Ott (eds.) *Places of Public Memory: The Rhetoric of Museums and Memorials*, Tuscaloosa: University of Alabama Press.

Budreau, L. (2010) *Bodies of War: World War I and the Politics of Commemoration in America, 1919–1933*, New York: New York University Press.

Carrier, P. (2000) "Places, Politics and the Archiving of Contemporary Memory in Pierre Nora's Les Lieux de mémoire," in Susannah Radstone (ed.) *Memory and Methodology*, Oxford: Berg. pp. 37–58.

Clout, H. (1996) *After the Ruins: Restoring the Countryside of Northern France after the Great War*, Exeter: University of Exeter Press.

Cresswell, T. (2004) *Place: A Short Introduction*, Malden, MA: Blackwell.

Demangeon, A. (1920) *Le Déclin de l'Europe*, Paris: Payot.
Graham, B. (1998) "The Past in Europe's Present: Diversity, Identity and the Construction of Place," in B. Graham (ed.) *Modern Europe: Place, Culture and Identity*, London: Arnold.
Grossman, E. (1984) "Architecture for a Public Client: The Monuments and Chapels of the American Battle Monuments Commission," *The Journal of the Society of Architectural Historians* 43: 119–143.
Heffernan, M. (1995) "For Ever England: The Western Front and the Politics of Remembrance in Britain," *Cultural Geographies* 2: 293–323. Online. Available HTTP: http://cgj.sagepub.com (accessed June 18, 2010).
House of Representatives. (1922, March 6) "*Commission to Erect Suitable Memorials Commemorating the Services of the American Solder in Europe*," U.S. Congress, Document No. 197, Records of the Battle Monuments Board, RG 117, Box 1. U.S. National Archives and Records Administration.
Kramer, A. (2007) *Dynamic of Destruction: Culture and Mass Killing in the First World War*, New York: Oxford University Press.
Lloyd, D. (1998) *Battlefield Tourism: Pilgrimage and the Commemoration of the Great War in Britain, Australia and Canada, 1919–1939*, Oxford: Berg.
Massey, D. (2005) *For Space*, London: Sage.
Meyer, R.E. (2001) "Stylistic Variation in the Western Front Battlefield Cemeteries of World War I Combatant Nations," *Markers*, 18: 188–253.
Mosse, G.L. (1990) *Fallen Soldiers: Reshaping the Memory of the World Wars*, New York: Oxford University Press.
Nora, P. (1989) "Between Memory and History: Les Lieux de Mémoire," trans. Marc Roudebush, *Representations* 26: 7–24.
Piehler, G.K. (1994) "The War Dead and the Gold Star: American Commemoration of the First World War," in J.R. Gillis (ed.) *Commemorations: The Politics of National Identity*, Princeton, NJ: Princeton University Press.
Sherman, D.J. (1999) *The Construction of Memory in Interwar France*, Chicago: University of Chicago Press.
Sledge, M. (2005) *Soldier Dead: How We Recover, Identify, Bury, and Honor Our Military Fallen*, New York: Columbia University Press.
Smith, A.D. (2003) *Chosen Peoples: Sacred Sources of National Identity*, New York: Oxford.
Stewart, J., and Dickinson, G. (2008) "Enunciating Locality in the Postmodern Suburb: Flatiron Crossing and the Colorado Lifestyle," *Western Journal of Communication* 72: 280–307.
Thrift, N. (1983) "Literature, the Production of Culture and the Politics of Space," *Antipode* 15: 12–24.
Zagacki, K.S., and Gallagher, V.J. (2009) "Rhetoric and Materiality in the Museum Park at the North Carolina Museum of Art," *Quarterly Journal of Speech* 95: 171–191.

Chapter 7

Materiality and urban communication

The rhetoric of communicative spaces

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In recent sessions in both Paris and Washington D.C., scholars interested in issues including media policy, architecture, communication, and urban planning met to discuss the concept and qualities of a "communicative city." When asked to develop five normative criteria to determine whether a city could be considered especially "communicative," one of the key themes that emerged from these scholars' responses was the necessity for such a city to have "places to interact/places of feeling." When asked what would disqualify a city from being considered "communicative," a major theme that emerged from the responses was "lack of public spaces for interaction." These were not the only suggested normative criteria for qualification or disqualification. Other suggested qualifying criteria included the need for a sound infrastructure (including technological infrastructure) and for elements of a civil society, whereas disqualifying criteria included segregation, political corruption and repression, and overly controlled social spaces and practices. However, all these responses suggest that, in order to understand the nature and possibility of communicative cities more fully, we would do well to actually examine the spaces within cities that enable citizens to engage communicatively. We refer to these spaces as "communicative spaces."

Scholars in rhetoric have taken materialistic principles and, by applying them to artifacts and structures within urban spaces, shown how they function to encourage and evoke interaction and feeling. Gallagher and LaWare (2007) address this issue, arguing that public art in urban spaces serves several important rhetorical functions, including highlighting, evoking, and intensifying emotional responses; inviting judgment; and invigorating or enabling agency. They write that public art sculptures evoke a very different type of embodied emotional response than what is elicited in more traditional advertising and marketing appeals.[1] And, in one of the few contemporary essays to examine urban landscape architecture or "garden design" from a rhetorical perspective, Rosenfield (1989) investigates the extent to which Central Park – the first urban park expressly constructed for general public use – served much the same function as that of civic oratory or eloquence, providing the means "to celebrate institutions and ideological principles thought to be the genius of those cultures."[1]

Indeed, the late nineteenth century and turn of the twentieth century in America witnessed a great deal of interest in the relationship between urban landscapes/public art/memorials/monuments and civic and civilizing engagement as evidenced by the City Beautiful and urban park movements. Burke (1947) captured the rhetorical impetus for these types of civic projects, writing that because "social status is not fixed or clearly defined" in the US, citizens desire "objective evidence" of their "status" (ibid.: 5). Clark (2004) further develops Burke's thesis, explaining that national parks represent symbolic settings that encourage visitors to "enact both individual and collective identity" (ibid.: 3). Burke's project of expanding the concept of rhetoric to encompass the various symbols that constitute a shared culture offers an explanation of how people are prompted by their shared experiences – material as well as verbal – to understand themselves and their communities in similar ways.

These two concepts, rhetorical landscapes and communicative spaces, provide a critical lens for evaluating the rhetorical enactments of an urban space that has been described as straddling the past and the future. Chicago's Millennium Park is "acclaimed as a unique fusion of art, architecture, and landscaping; embraced by diverse Chicagoans as a park for all people" (Gilfoyle 2006: x). In this chapter, we examine the extent to which Millennium Park lives up to these claims. In order to determine its potential as a rhetorical-communicative landscape, we examine how the material and symbolic features of the park create a space that is both *inside and outside* of the urban experience and of the city's history, and that demonstrates the possibilities of the human–nature, human–human, and human–urban interface. In order to determine its potential as a communicative space, we explore how the park situates visitors as engaging in *modes of performance*, related to interacting and feeling. In what follows, we flesh out our critical framework and then apply it to an analysis of Millennium Park. We conclude with an evaluation of the communicative nature of the park and the potentials and pitfalls of this approach to defining and assessing urban spaces more generally. Our analysis is very much in concert with the themes of this collection because it directs attention to the role of "materiality" in communication in a very particular way. By examining and interpreting the materiality of Millennium Park – literally its brick and mortar construction – we illuminate the extent to which it functions as an important physical infrastructure of communication.

Rhetorical enactments in urban parks

In a recent essay examining the rhetoric of the Museum Park at the North Carolina Museum of Art (NCMA), Zagacki and Gallagher (2009) exemplify how artifacts, such as the sculptures and installations in the park, serve as *enactments*[2] that invoke a kind of collective consciousness and sense of civic

and cultural understanding. Zagacki and Gallagher's analysis centers on two distinctive enactments which they claim are central to representations and experiences of the human–nature interface: *inside/outside* and *regenerative/transformative*. By *inside/outside* they refer to:

> the experience of moving 1) between constructed spaces, such as a museum space or an urban landscape, to less constructed, more organic spaces such as the outdoor park or the rural landscape; and 2) between natural history and human history. By *regenerative/transformative* [they] mean moving 1) from natural states to human constructed states and back again to nature, and 2) from one state of understanding to another.

In this essay, we extend the concept of inside/outside enactments to an examination of the human–human and human–urban interfaces, in addition to the human–nature interface. As a result, *inside/outside* is used to refer also to the experience of moving (1) between highly constructed urban spaces and more organic urban landscapes and (2) between the past/present and present/future history of the city.

A key aspect of Zagacki and Gallagher's analysis of enactments is the extent to which parks may function as performative spaces. In the case of the Museum Park at the NCMA, the environmental sculptures and other artworks combined with natural elements to create an innovative public space ripe with meaning. In addition to supplying local residents with recreational and leisure opportunities, the NCMA and, as we will demonstrate, Millennium Park, represent an emerging trend in landscapes that seek to mediate the human–nature, human–urban, and human–human interfaces. The material rhetorics of parks and public art sites do not so much function to articulate policy proposals in an argumentative space. Rather, such sites open up an experimental, performative space, in which visitors are pushed to look beyond the normal conventions and boundaries of urban and rural landscape design, to experience what Crary calls "counter-forms of attention" (1999: 18).

In short, parks like the NMCA and Millennium point to how natural and urban/suburban spaces in Raleigh, Chicago, and elsewhere might co-exist or be alternatively imagined and how new versions of community might be experienced in these urban/rural settings. And, in this sense, they function as communicative spaces that enhance the "communicativety" of the respective cities in which they are located. As Gumpert and Drucker (2008) point out, communicative cities and the public parks that comprise them constitute places in which "to encounter others" (ibid.: 198), to encourage "civic engagement" (ibid.: 199), and to enhance "identity and identification" (ibid.: 199). Especially important to community are parks and other public spaces, which are "places to congregate and play to offset the constricting density" of the surrounding urban landscape (ibid.: 202).

Both the Museum Park and Millennium Park were developed as responses to (1) environmental issues of direct concern to citizens and/or

associated with environmentally sensitive programs and initiatives, and (2) the desire to bring urban populations into closer contact with each other in ways that foster a sense of community. While the city of Raleigh is known for its green spaces, many residents and their political leaders are wrestling with ways of managing the area's rapid growth and dwindling natural resources. The Museum Park's sculptures and installations enable visitors to experience the natural space into which they enter, and the environmental concerns associated with (spaces like) it in innovative ways, through what Cant and Morris (2006) call "embodied-sensuous experience … and performative, 'non-representational' and reflexive approaches."

As material rhetoric, sculptures in the park contextualized their respective grounds, linking those who wandered there with an adjacent women's college and the rest of the city of Raleigh's Greenway trail system. Accordingly, the sites were evocative of community in that they acted as gathering places and as public passageways where visitors could convene, converse, and move to and from the surrounding urban areas. Millennium Park is also built in such a manner that visitors are connected – by bridges, railways, sidewalks, and bike lanes – to the rest of Chicago and with other visitors to the park and is, at least in part, a result of Chicago Mayor Daley's commitment to environmentally sensitive programs.[3] As a focal point in the center of the city, the park extends outward in a series of nodes and networks constantly reminding visitors of their connectedness to the larger whole. But the interior set of walking paths, garden passages, lawns and other material features bring park-goers into contact with one another and thus, like the Museum Park, resist the sense of urban alienation and anomie sometimes experienced by urban dwellers. Gumpert and Drucker (2008) note that streets and transportation are crucial to communicative cities: even though they are physical, fixed, and semi-permanent features, they carry "emotional impact as well," setting agendas and communicating "to the [city's] inhabitants" (ibid.: 202). Indeed, the interconnectedness of Millennium Park to the surrounding cityscape evokes a kind of comfort in the knowledge that people can easily flow in and out of the park and stands as a kind of material invitation for citizens to travel to downtown Chicago, turning center city into a place of play and gathering rather than simply an area for business and shopping.

To the extent that Millennium Park's sculptures and material features, like those at the NCMA, provide enactments of the human–nature interface and interactive networks to increase citizen contact, Gilfoyle (2006) argues that,

> Each component was designed to stimulate a reaction from viewers. Observers look into a sculpture, walk on water, listen to music, pass through a prairie landscape, or cross a bridge. The art still privileges the individual…but the viewer, not the artist interprets the art.
>
> (Ibid.: 314)

This focus on the interpretation of the viewer, the stimulation of a reaction, as well as placing visitors into direct contact with each other, is consistent with the notion of "places to interact/places of feeling" as a criterion for communicative cities. In the analysis below, we examine the rhetorical enactments of Millennium Park's symbolic and material features to assess the extent to which the park lives up to this criterion.

Millennium park and its enactments

The forces that generated Millennium Park "are a reflection of nearly two centuries of Chicago history, politics, and culture" (Gilfoyle 2006: xiii). Indeed, prior to the 1850s, the waters of Lake Michigan covered the area. This was followed by nearly a century of land creation and usage determined by the Illinois Central Railway Company, which was followed by the gradual creation and development of Grant Park by civic leaders. The development of the final corner, of what is sometimes referred to as Chicago's "front yard," into a "combined park, outdoor art museum and cultural center" was completed in 2004, with the grand opening on July 16. Daley is credited with insisting that culture, including visual art, literature, music, and architecture, is "a primary agent of personal expression and social cohesion" and therefore necessary to urban life (Gilfoyle 2006: xii).

Of course, the park was not without its detractors, and in fact, generated considerable controversy during the process of raising public funds to help defray the cost of construction. Many critics raised questions about the cost overrun, complaining that the enormous tax expenditures could have been allocated to other worthy causes – namely, helping Chicago's impoverished citizens and inner city schools. An article in the *New York Times* raised the specter of big-city corruption and nepotism when it reported that an overcharged contract for cleaning up the park had been given to a company that funneled large contributions to Daley's election campaign (Kinzer 2004). Other critics have raised concerns about the use of mixed taxpayer and corporate funding and associated naming rights for sections of the park.

These criticisms notwithstanding, the Millennium Park experienced by visitors is a collection of powerful, large-scale art located within a series of spacious, open plazas and surrounded on two sides by some of the world's tallest skyscrapers and on a third side by the expanse of Lake Michigan. The park is comprised of a pavilion (the Frank Gehry designed Pritzker Pavilion and the Great Lawn), a theater (the Joan W. and Irving B. Harris Theater for Music and Dance); a bridge (the Frank Gehry designed BP bridge), a fountain (the Jaume Plensa designed Crown Fountain), a garden (the Gustafson designed Lurie Garden), and a sculpture (Anish Kapoor's *Cloud Gate*). Other features include the peristyle Millennium Monument in

Wrigley Square which is a historical reference to the peristyle that was long a part of the lake front/Grant Park area. Additionally, Millennium Park features the McCormick Tribune Plaza, which serves as a skating rink in winter and an outdoor music and eating venue in the summer; a below-ground intermodal transportation center (connecting automobile, bus, and rail traffic); the Bicycle Station (a 300-bike parking facility complete with lockers, showers, bike rentals, a repair area, a café, and the Chicago Police Department's Bike Patrol Group); the Exelon Pavilions (four structures that incorporate solar panels and photovoltaic technology and serve as entrances to the underground garage and transportation center); the Chase promenade and the Boeing Gallery which accommodate rotating public art exhibits. A second pedestrian bridge, the Nichols Bridgeway, designed by Renzo Piano and connecting the Modern Wing (also designed by Piano) of the Art Institute of Chicago with Millennium Park, opened in May 2009.

Inside/outside

One of the concerns voiced by critics of Millennium Park was that having so many large scale, distinctive sculptures, and architectural elements would leave visitors feeling as if the individual elements were screaming at each other. However, given the many entrances to the park and the ways in which it is experienced from both outside of the park (from a car window, a skyscraper window, while walking along Michigan Avenue, speeding by in a bus, etc.) and inside the park's physical boundaries, the sculptures, and elements function more as moments of performativity. For instance, Anish Kapoor's *Cloud Gate*, referred to by Chicagoans simply as "the Bean," is the most arresting site for visitors entering the park from the far northwest corner of Michigan Avenue. *Cloud Gate* "is one of the world's largest outdoor sculptures: 110 tons, sixty-six feet long, forty-two feet wide and thirty-three feet high" (Gilfoyle 2006: 261). The massive sculpture's gleaming, elliptical surface is forged of a seamless series of 168 highly polished stainless steel plates, each weighing between 1,000 and 2,000 pounds. Visitors can walk under and around the sculpture because of the concave opening along its underside. Once a visitor is underneath, his or her eyes are drawn upward into the 27-foot-high omphalos, a mirrored indentation providing multiple reflections of those below.

While the sculpture is literally *inside* the park, its reflective surface, as visitors approach, projects images of what is *outside* of the park – the surrounding cityscape, the sky, and the clouds. This sense of seeing what is outside, just as one is moving further inside the park and closer to the sculpture, provides a heightened sense of one's urban surroundings even as it accentuates the separateness, indeed, the set-apartness of the park. Yet, one never feels that the park is separate from the larger city. As a visitor draws closer, the reflection begins to change to include some of the park and its

features, and, ultimately, to include the visitor. Passing under and through, visitors actually enter "inside" the sculpture. As it were, they can look up to find a reflection of themselves and others that situates them both as individuals and as a type of human kaleidoscope piece, one of a larger collective of other visitors, all moving and twirling and shifting as they look up into the reflective surface of the sculpture's underbelly. But, as suggested above, *Cloud Gate* pays homage to the magnificence of the reflected cityscape as much as it interpellates viewers to be participants in, or citizens of, it. This performative moment isolates the viewer even as it calls upon him/her to be part of the larger city space to which they find themselves both literally and figuratively connected.

In addition to its arresting size and quality, the organic shape of "the Bean" contrasts sharply with the highly geometric shapes of the cityscape that surrounds and is reflected by it. Conceptualized as a gate, it becomes the metaphorical entrance both into and out of the park, further solidifying the inside/outside enactment it entails. The creation of multiple reflections, depending on one's physical distance from and orientation to the sculpture further enhances the performative nature of the experience – visitors enact multiple viewpoints of the surrounding cityscape, the park, the ground, and, eventually, as they are drawn into the sculpture itself, themselves and their fellow citizens/visitors. In this way, experiencing *Cloud Gate* changes the way people see the world around them, making them aware of the move from cityscape to art space/landscape and back again as well as supplying them with the cognitive frame from which to appreciate and partake in a city that claims to be cosmopolitan and multicultural.

By contrast, one of the rotating art exhibits, on the Chase Promenade and Boeing Gallery (exhibited during 2007 and 2008) featured five sculptures by Mark di Suvero, whose works are known for the way they appear to balance heavy industrial metal and natural forces, solids and vacant spaces, earth and sky, and human-constructed materials and nature. The choice of di Suvero's sculptures for (temporary) residence in Millennium Park was a good one. His works formed a conceptual bridge with the cityscape outside the park. With their steely surfaces and crisscrossing rectilinear planes and columns, di Suvero's sculptures mimicked the skyscrapers of downtown Chicago and in this sense brought them *inside* the park, where they could become both an object of commemoration and of "play." Thus, by allowing visitors/viewers to see the massive buildings outside as serving essentially human functions, and by inviting them to (quite literally) play on the imitations inside the park, di Suvero "humanized" the glass, concrete, and steel cityscape standing all around on the outside.

Further down Michigan Avenue is the Crown Fountain. It consists of two rectangular glass brick towers which are 50 feet tall, 23 feet wide, and 16 feet thick. The towers are illuminated by over 1 million light-emitting diodes

that line the interior of each tower's façade, turning them into high-rise television screens. The towers display the video portraits of approximately 1,000 Chicago citizens that change every 5 minutes. At timed intervals, the faces on the towers purse their lips and water spouts out [a digital reference to the European, Renaissance-era gargoyles that inspired Plensa (Gilfoyle 2006: 277)]. The towers also periodically broadcast a variety of nature scenes, interspersed between the faces. At night, the three sides of the towers not facing each other display changing colors of orange, red, yellow, green, purple, and white. The towers face one another across a 232-foot-long, 48-foot-wide rectangular reflecting "skin pool." In warm weather, water cascades down the sides of the towers into the shallow, quarter-inch-deep pool paved in black African granite, enabling visitors to "walk on water."

With its two tall towers facing one another, the Crown Fountain becomes a highly interactive and embodied experience: when a visitor is "inside" the fountain – that is, when he or she is standing between the two towers – he or she experiences the faces of two (fellow) Chicagoans, apparently looking at one another and/or at the visitor him or herself. The visitor also feels the water during the warm weather months – a welcome intrusion from outside, of nature entering into the heated cityscape – and experiences the "surprise" of the sudden stoppage of the cascading water and the streaming from the pursed lips. The experience is one that is uniquely inside the urban experience (but with hints of the natural), since for many people, it is only in urban space that they encounter and interact with people of multiple races, ethnic backgrounds, diverse economic classes, and so on. The fountain emphasizes the playfulness as well as the unexpectedness of such encounters, involving visitors' senses of sight, hearing, and touch creating a multimodal, performative space of interaction.[4]

The fountain also enacts a move between the past/present and present/future of the city. Thus, Crown Fountain provides additional communicative infrastructure because, as Gumpert and Drucker (2008) might observe, it transcends and stores "time and place" (ibid.: 203). Crown Fountain does so through its location and its enactment as a public fountain. Fountains have historically played significant roles in civic life, in cities across America and in Europe, initially serving functional needs such as washing and drinking and eventually serving more abstract, epideictic needs such as celebrating the values "of religion, health, purity, wisdom, or youth" (Gilfoyle 2006: 277). Plensa's instantiation of the idea of a public fountain gestures to the historic past of public fountains where people came to wash, and, by incorporating the giant LED screens, becomes a visual archive of a progressive city pushing into the future. In so doing it (1) "offers something eternally moving to the city" (is both inside and outside of the city's history), (2) is something that changes with the seasons (exists inside and outside of nature), (3) enables "later generations to interpret and reinterpret the art" (is inside and outside of the

contemporary moment; Gilfoyle 2006: 288), and (4) with its combination of traditional and yet more contemporary digital design, the fountain signifies Chicago's vision for urban living which, while rooted in the past, also remains solidly pointed toward the future.

The inside/outside enactments of the other features of the park are just as arresting and interesting to consider. The Jay Pritzker Music Pavilion and Great Lawn have together attracted more attention than perhaps any other element, not least because of a design that provides for multiple layers of the inside/outside enactment and the interactive possibilities that come along with it. A sculptural "headdress" of steel ribbons supported by 12 trusses provides cover for the closest seats and the stage portion of the pavilion is both an outdoor music stage and an indoor reception area. Additionally, two massive fifty-by-thirty-foot sliding glass doors can be shut to completely enclose the stage. On the Great Lawn, 4,000 fixed seats remain available for some visitors while 6,000–7,000 people can spread out on the lawn itself and easily mingle with fellow concert-goers. Like other city parks, the grassy surface gestures to the natural world that once dominated the landscape and captures the longing for nature many urban dwellers feel in a concrete and steel-dominated place. Here, too, however, the experience is one of moving between the past/present and present/future of the city, or inside and outside of history. As a unique instantiation of an outdoor music pavilion, the Pritzker Pavilion gestures toward the historical uses of the landscape and to the Grant Park Music Pavilion that preceded it.

The Gehry designed BP Bridge both complements the Pritzker Pavilion and provides another, distinct enactment of inside/outside. The bridge is 925 feet in length, 10 times the width of Columbus Avenue below, and is clad in brushed stainless steel plates that overlap like scales, transforming the structure into a slithering, snakelike shape. The form is both whimsical and functional: the large number of curves allows for a gentle, 5 percent slope, making the bridge accessible to wheelchair users. In addition, the bridge connects the newer, twenty-first century park with the older, lakefront park, linking past with present. As visitors cross the bridge, they reach a point where the waters of Lake Michigan become visible, the breeze from the lake can be felt, and the park becomes more of a traditional city park with tennis courts, trees, benches, and paths. The visitor has enacted a move from the highly constructed cityscape through the estheticized and highly experiential Millennium Park to the landscape of the traditional lakefront park. This is a walk that entails moving from supremely geometric to more and more organic shapes and ends in the lake itself. Thus, visitors experience enactments of human–urban, human–human, and human–nature interfaces as they walk through the park. The bridge acts as, what Gumpert and Drucker (2008) call, a "dynamic feature" of communicative cities, one of which is "flexibility and transformability" (ibid.: 203). "In terms of flexibility," the authors explain, "space and place are convertible: sidewalks

become cafes, streets become fairs, parks become concert halls … " (ibid.: 204). Millennium Park itself represents such a dynamic feature, but the bridge in particular converts space and time. Functionally, it transports a traveler from one point in the park to another while simultaneously serving as a symbolic bridge between past and present and between the organic and the human-made; it is both a means of transport and a suitable resting spot or a place from which to peer at the magnificent lake beyond. As architectural critic Kamin says about the bridge:

> It's a bridge, in a sense, to nowhere … People cross it, then they come back to where they started. They just want to be on it … The riverlike shape of the bridge forms eddies where, on occasion, people stop and talk to one another.
>
> (Ibid.: 2004)

Implications and conclusions

As this discussion of the inside/outside enactments of Millennium Park suggests, the park may be said to meet the criteria of a communicative city, a space of feeling and a space for interaction – that is, it is a distinctly communicative space. The park's elements, taken together, are characterized by their highly interactive nature: visitors perform certain types of relationships between themselves and the cityscape around them as well as between themselves and other citizens. In so doing, they experience their city from a much richer and varied set of sensibilities, opening them up to interactions and new perspectives.

In the broadest sense what is particularly compelling about a place like Millennium Park is the degree to which it and other cultural public works projects fit within a history of attempts to redirect or reorient the conduct of individuals. Millennium Park, from this perspective, is an effort to govern particular forms of interactions with others, with the self, and with objects. As Ron Greene (1998) has pointed out, such material spaces are important because of the ways in which they "create conditions of possibility for a governing apparatus to judge and program reality" (ibid.: 22). In this respect, what remains to be examined in the future is, first, the extent to which these possible modes of governable performance (in this case, a specific form of reflection or interaction which occurs in Millennium Park – i.e., in the "places to interact/places of feeling") actually emerge and how they are constitutive of certain pre-existing or shifting normative criteria of citizenship. The critical question here, of course, concerns *whose* criteria of citizenship are disciplined and the ways in which these criteria define one sort of citizenship over another. Second, if in fact public parks actually do work to alter people's behavior and/or alter their mode of reflection and interaction, it is important to consider how these projects of material rhetoric are more "material" than other

forms of discourse. In the analysis above, our claims of Millennium Park being materialist are, frankly, ontological. That is, we have suggested that the objects of the park *are* more material than what rhetorical scholars have previously been studying, such as live speeches, texts filled with speeches, even perhaps digital recordings taken by someone walking through a park. This is precisely because the materials (and the forms into which they are shaped) have the potential to make a difference in how people view and participate in them and in the larger modes of performativity related to urban living. As Blair explains about the materiality of memorials and other constructed sites,

> they do perhaps even more obvious work on the body. They direct the vision to particular features, and they direct – sometimes even control – the vector, speed, or possibilities of physical movement. Touching them is very different from touching a book … and that touch sometimes yields profound responses … [Material] rhetoric acts on the whole person, not just on the "hearts and minds" of its audience.
>
> (1999: 46)

At the same time, it is important to point out once again that Millennium Park was not without (and continues to have) its critics. Indeed the contested nature of the park reveals the fact that it emerged as part of a complex series of negotiations between political officials, local community and business leaders, artists, engineers, and architects, and other major officials who helped to plan for Millennium Park or who opposed it. These negotiations raise critical questions, similar to those raised above, that go to the heart of the notion of a communicative city: To what extent does the goal of urban "communication," as a public good with material instantiation, come to trump the interests of underprivileged urban populations potentially made even more impoverished when publicly financed social programs fail to be funded because those monies are diverted to city park projects? Should the subordination of such interests actually disqualify a city as communicative, given that Gumpert and Drucker (2008) cite as some disqualifying features corruption, censorship and repression of speech, discouraging heterogeneous urban populations, ignoring the concerns of citizens who believe they do not have a stake in a city's improvement, and so on? And in what sense does the rhetoric of esthetics and urban design favoring public projects like Millennium Park simply mask the deeper interests of multinational corporations and neoliberal institutions while devaluing or reducing the concerns of a particular city's under or working class?

Alternatively, as partial antidotes to this critique, we might consider two points: First, a huge and somewhat controversial endeavor like Millennium Park actually suggests how social, political, and other

networks can stimulate the interaction (i.e., political deliberation, corporate fundraising, etc.) necessary to bring large, controversial public projects of any sort to fruition – projects that could be apparently beneficial to all. Just as Lanham (1995) has written about the productive debate surrounding Christo's "Running Fence," the arguments over Millennium Park may reveal much about the possibility of human transformation. Lanham described the outcome of the "Running Fence" controversy this way: "the hearing[s], the plan[s], the rendering[s], the Environmental Impact Statement; the construction worker, the councilman, the artist" – all of this demonstrated that "human purpose will be both the same and utterly transformed" (ibid.: 50). Second, despite the problems associated with planning (not to mention the internal structural defects and other shortcomings of) projects like Millennium Park, the Park nevertheless marks a hopeful move toward what many cities might yet become. As Gumpert and Drucker (2008) put it,

> A chasm separates the normative criteria – our expectations and desires [for what, ideally, constitutes a communicative city] – from what occurs within the structures of the city – life as it is played out 24 hours a day in its harsh and multifaceted scope.
>
> (Ibid.: 200)

As a product of machine politics but also noble philanthropy, civic engagement, and esthetic vision, Millennium Park reflects this deeper tension. Insofar as we believe the park can be seen as a material enactment of these norms, it may also resolve this deeper tension in a productive manner.

In providing an understanding of the rhetorical nature of the park's materiality, through an exploration of the inside/outside enactment, this analysis suggests how we can identify and evaluate the qualities that lead to interaction and enhanced agency for all citizens and, ultimately, to a way of theorizing communicative spaces and the cities which house them.

Notes

1 Whereas advertising uses emotional appeals quite often to override rational and/or argumentative capacity … public art inspires a sense-making impulse … It cannot be consumed like a product – it continues to stay in there in our path, in our city, in our day-to-day seeing of it long after the last candy bar, burger, pizza slice, Bud Light, are gone.

(LaWare and Gallagher 2007: 163)

2 Blair used the term "enactment" to advocate for a shift, by rhetorical critics, from a focus strictly on symbolicity to a consideration of material consequences and performativity in their analyses.

3 Throughout the 1990s, the park district planted an estimated 7,000 trees annually in city parks, totaling approximately 300,000 between 1989 and 2002 … By 2003, 63 miles of Chicago streets included new median plantings. From 1997 to 1999, under the Campus Parks Program, Chicago built or restored 55 school parks. Daley also … helped establish the Chicago Center for Green Technology, a former Brownfield site that was transformed into a model for sustainable environmental design.

(Gilfoyle 2006: 83)

4 In fact, dualities such as public/private, interior/exterior, absence/presence, opaque/translucent are central to Plensa's work as is the desire to "integrate the viewer into an interactive relationship with the art" (Gilfoyle 2006: 283–285).

References

Blair, C. (1999) "Contemporary U.S. Memorial Sites as Exemplars of Rhetoric's Materiality," in Selzer, J. and Crowley, S. (eds.), *Rhetorical Bodies*, Madison, WI: University of Wisconsin Press.

Blair, C., Jeppeson, M.S. and Pucci, E. Jr. (1991) "Public Memorializing in Postmodernity: The Vietnam Veterans Memorial as Prototype," *Quarterly Journal of Speech*, 77: 289–308.

Blair, C. (2008) "Civil Rights/Civil Sites: ' . . . Until Justice Rolls Down Like Waters'," The Carroll Arnold Distinguished Lecture, Boston: Pearson.

Burke, K. (1947) "The American Way," *Touchstone*, December: 3–9.

Cant, S.G. and Morris, N.J. (2006) "Geographies of Art and the Environment," *Social & Cultural Geography*, 7: 859.

Clark, G. (2004) *Rhetorical Landscapes in American: Variations on a Theme from Kenneth Burke*, Columbia, SC: University of South Carolina Press.

Crary, J. (1999) *Suspension of Perception: Attention, Spectacle, and Modern Culture*, Cambridge, MA: MIT Press.

Gallagher, V.J. and LaWare, M.R. (2007) "The Power of Agency: Urban Communication and the Rhetoric of Public Art," in Burd, G., Drucker, S.J. and Gumpert, G. (eds.), *The Urban Communication Reader*, Cresskill, NJ: Hampton Press, Inc.

Gilfoyle, T.J. (2006) *Millennium Park: Creating a Chicago Landmark*, Chicago, IL: University of Chicago Press.

Greene, R.W. (1998) "Another Materialist Rhetoric," *Critical Studies in Mass Communication*, 15: 21–41.

Gumpert, G. and Drucker, S.J. (2008) "Communicative Cities," *International Communication Gazette*, 70: 195–208.

Halloran, M. and Clark, G. (2006) "National Park Landscapes and the Rhetorical Display of Civic Religion," in Lawrence J. Prelli (ed.), *Rhetorics of Display*, Columbia, SC: University of South Carolina Press.

Kamin, B. (2004a) "Sentimental Journey," *Chicago Tribune*, 15 July, sec. 7: 3.

Kamin, B. (2004b). "A People's Park for the Future," *Chicago Tribune*, 29 August, sec. 7: 5.

Kinzer, S. (2004) "Letter from Chicago: A Prized Project, a Mayor and Persistent Criticism." *The New York Times*, 13 July. http://query.nytimes.com/gst/fullpage.html?res=9806EED71E3BF930A25754C0A9629C8B63

Lanham, Richard. (1995) *The Electronic Word: Democracy, Technology, and The Arts*, Chicago: University of Chicago Press.

Pollock, D. (1998) *Exceptional Spaces: Essay in Performance and History*, Chapel Hill, NC: The University of North Carolina Press.

Rosenfield, L.W. (1989) "Central Park and the Celebration of Civic Virtue," in Thomas Benson (ed.), *American Rhetoric: Context and Criticism*, Carbondale, IL: Southern Illinois University Press.

Vodvarka, F. (2006) "BP Bridge: Journey's End," *Sense and Society*, 1: 93–96.

Zagacki, K.S. and Gallagher, V.J. (2009) "Rhetoric and materiality in the Museum Park at the North Carolina Museum of Art," *Quarterly Journal of Speech*, 95(2): 171–191.

Chapter 8

The birth of the "neoliberal" city and its media

James Hay

Beyond the "new media" city

This chapter's account of the birth of "neoliberal" city and its media shares with various veins of research in Communication and Media Studies, Urban Sociology, and Geography an interest in the "new media" city. However, this chapter proposes an alternative theory, history, and analysis of the past and current relation between media and cities, specifically questioning recent formulations of the (new) media city. To what extent have recent theories' and analyses' understanding of the linkage between media and urban space emphasized that one is the primary determination of the other? To what extent have they emphasized politics, economy, culture, or technology as the single, primary, or most important determination? To what extent have they understood any of these determinations as singular and self-determining? These questions lead me to ask another set of questions. What would a study of the production of a media city involve if it did not place "media" or media-making at the center of a chain of productivity? What would be involved instead in an analysis that considers the current media city (the "newness" of the linkage between media and the city) through a history of spatial practice and the production of space? Addressing these questions involves recognizing the Modern bias of most studies of the media/city, as well as the possibilities of a counter-Modern form of thought and analysis from and about the media city.

Addressing these questions also allows me to examine how the current formation of the new media city has called forth, instrumentalized, and/or targeted specific technologies ("media") of freedom and government. In this way, the chapter considers how the new media city became the object of liberal programs and policies (a recent rationality and arrangement of liberal government) oriented toward a new regime of *urban renewal*. The current liberal city's formation and reformism as media space and network are not new; the city has been a laboratory and performance stage of liberal reform since the nineteenth century. By charting this history, the chapter examines how a recent discourse and reasoning about the new media city develops out of and perpetuates a Modern reasoning about progress, renewal, and

reinvention, but also how new media have become different instruments or targets of urban reform than in the past (even as what is new in the present context acts on and rematerializes old spaces and media). The chapter proposes an analytic assembled out of several theoretical orientations, none of which are overtly focused on communication/media, though they are indispensable for thinking about liberalism, the city, and their media – historically and geographically.

Rethinking spatial materialism … of the "urban revolution" and its media

One starting point for thinking about the birth of the neoliberal city and its media, and for rethinking the "media city" through an alternative account of *materialities*, is Henri Lefebvre's reformulation of Marxist historical or dialectical materialism as, what I have termed, a *spatial materialism* (Hay, 2001, 2004, 2005, 2009). In *Everyday Life in the Modern World* (1971/1994), Lefebvre proposed that accounting for Modern life entailed a form of philosophical, scientific, and critical thought that grappled with its own embeddedness in the everyday. He thus proposed that Marxist conceptions of history required a keener sense of the littleness and insignificance of everyday recurrence – as a structuring and ordering dimension, as well as the flux and complexity, of Modern life. For Lefebvre, Modernity was too grand and general a concept – one that always needed to be squared with and adduced through the quotidian as "material culture." Historical and political "revolution" occurred daily. No historical epoch is settled; the Modern world can not be generalized through descriptions such as "technological society," "consumer society," or "cybernetic society."

Lefebvre continued these themes as he turned his attention during the 1960s to "the production of space," a phrase that he exploited wonderfully for its double meaning. First, the term emphasized that space is *produced*, a perspective that ran counter to the Modern view of space as abstract (computed mathematically or made rational through technicians such as city planners). In that sense, he emphasized the historicity and provisionality of space and of the abstractions of space dear to science and philosophy. Space can not be seen as globally uniform, as historically stable, or as abstract if one recognizes that every society makes, practices, and lives its spatial relations. In *The Production of Space* (1972/1991), he emphasized both the economic and cultural (artistic/representational) practices that produce and determine space, but by describing space as practiced and lived he also highlighted the little everyday making of space. However, "the production of space" also referred to space as *productive* of social relations. In this second sense, space is a condition of future practices – a basis for "making History." In both these senses, "the production of space" is a means and an end, but an end that is never finished and settled.

By construing "the production of space" in these dialectical terms, Lefebvre cast History and Space as mutually constitutive. In so doing, he also recast Marxist historical materialism's dialectical account of the *material* means of making and reproducing social relations, which Lefebvre viewed as operating with an overly or narrowly economistic understanding of "production," work, and their role in "making History." But Lefebvre's formulation of the "production of space" went further than simply decoupling historical materialism from purely economic determinations; he also complicated the Marxist formulation of base and superstructure as the theoretical and historiographic lens for understanding how social relations were produced and reproduced. He discussed social space as produced by economic determinations as well as a system of representation, art, and culture, describing Venice (at length) as both a "work of art" and financed labor. In this way, his explanation of "the production of space" responded to the two dominant veins of French Marxist theory in the 1960s – political economy and Structuralism. However, by emphasizing that space is not simply produced but also productive, and that the productivity of space occurs up through everyday spatial practice and through space as lived, "the production of space" became a strategy for underscoring the radical *overdetermination* of social relations. Studying the production of space became a means of turning historical materialism onto the multiple, everyday spatial practices of living social relations, and onto the emergent and residual spatial practices that settled and unsettled the living of those relations. Lefebvre's "spatial materialism" emphasized the need for a heuristic that avoided reducing a historical context to a single motor of history by emphasizing instead the importance of *mapping* the historical complexity of materials for producing social relations and living life spatially.

Lefebvre offered a parallel or counter-history to a Marxist history of the emergence of an industrial society and capitalist economy, describing Modernity as productive of "abstract space," and the Modern city as the primary location of abstract space (particularly as the city and urban life drifted by the 1960s toward suburbanization). However, he also made a distinction between "the city" (connoting a fairly delimited social space) and "the urban" (a complex of conditions, a thick texture of Modern life). So within his history of Modern social space, he charted an "urban revolution": the *birth* or ascendance of a "period when the urban problematic becomes predominant, when the search for solutions and modalities unique to urban society are foremost" (Lefebvre, 1970/2003, p. 5). Although he considered the "urban problematic" as not absorbing all questions about Modernity, his argument provides a lens through which to examine a coalescence of "solutions and modalities" considered Modern. Just as importantly, his use of the term "revolution" cast the urban as a spatial and historical *stage* for contemporary politics – albeit a politics and form of political thought located in the flux and overdeterminedness of the everyday. The analysis of a "revolutionary" urban politics proposed by Lefebvre also cast urban space

as an increasingly crucial stage for reproducing social relations economically and culturally. The urban revolution is thus a *critical* point – a space of *crisis* requiring an ongoing "search for solutions and modalities unique" to it.

There are two implications of Lefebvre's writing about "the production of space" and "the urban revolution" that I want to pursue further in this chapter. One has to do with the (re)production of urban space and the *urban revolution* as a (Modern) history of "urban renewal." As I explain in the next section, urban renewal is a Modern problem requiring solutions and modalities, but it is an unfinished project – productive of and shaped by the spatiality of social relations and life. This brings me to a second implication that pertains particularly to solutions and modalities of urban renewal as a problematic. My project asks how *media* have mattered within the production of urban space, and of urban renewal construed this way. Given that Lefebvre had relatively little to say about communication media, some effort is necessary to pull his thought in that direction. However, moving his thought that way introduces a perspective about the "media city" that is uncommon in Media Studies which tend to place media at the center of the world and any question about it, and tend to explain the history of media (and the media city) as driven primarily by media industries and/or representations.

Liberalism, governmentality, and the modern history of urban renewal

Although thinking about urban renewal through a spatial materialism helps focus attention on the materials, modalities, and "media" involved in the Modern (re)production of urban space (asking which kind of media practices are called forth by and instrumental to the reproduction of space), my interest in urban renewal opens onto a slightly different (though not contrary) set of questions than Lefebvre addressed. Because urban renewal, as a Modern problem and solution, is a moral project oriented toward *improving* cities and urban populations, it occurred through the birth of liberal government, and through the proliferation of what Michel Foucault referred to as the "technologies of government" accompanying that birth.

Foucault considered liberalism a governmental *rationality* that not only recognized the virtue of individual sovereignty, freedoms, and rights but also relied on the proliferation of technologies throughout society for knowing, improving, and disciplining the behavior of individuals and populations. He described these means of "watching over" populations as a Modern "pastoral power" that rechanneled pre-Modern Christianity's techniques of salvation through Modern forms of "welfare" administered by the State and an increasing number of institutions and programs in "civil society." For Foucault, the Modern programs overseeing the health and security of

individuals and populations worked simultaneously towards "social improvement" and maintaining "order."

In this way, Foucault's early writing about the "birth" of the asylum, the clinic, and the prison provided a way of thinking *laterally* (rather than head-on) about political and economic Modernity – through histories that decentered the primacy of liberalism and capitalism and that highlighted the relation between the rationality and authority of political science and economics. To the extent that liberalism and capitalism were part of the Modern exercise of power, their practice was diffused through micro-logics, differentiated and differentiating techniques, dispersed authorities/rationalities, and networks of power – and thus could not be readily abstracted as autonomous, except by the Modern differentiating machinery that separated and ordered the Modern world in that way. In this way, Foucault famously provided an alternative to Marxism's penchant to explain liberalism and capitalism primarily in terms of political economic processes.

In his late career, Foucault re-thought liberalism through the history of programs and technologies of "security," "governmentality," and "biopower." His lecture "On Governmentality" (1978) proposed[1] that the Modern conception (and problem) of "government" involved the dispersion of practices and technologies of governance and management (of children, family, oneself) which operated separately from but interdependently with forms of State government – the latter of which, he suggested, should be studied as the last (rather than the primary) locus of government. Liberalism, in this sense, was not only "born" in conjunction with the government of patients, criminals, the "mad," the poor, or any potentially unruly or ungovernable individual/population but also in conjunction with the "positive" forms of "police"/policy and administration that worked continuously to keep society "healthy."

In *The Birth of Biopolitics*, Foucault offered a sustained and explicit account of the connections between liberalism and capitalist economy by charting the historical and geographic variation and transformation of liberalism and political economy – across eighteenth-century French Physicocracy, nineteenth-century British liberalism, 1950s and 1960s German "ordo-liberalism," and a post-1960s US "neoliberalism." Because Foucault's lectures on neoliberalism were given in the late 1970s, they introduced a way of thinking about neoliberalism that was ahead of a critical discourse about neoliberalism which developed in the West over the 1990s and 2000s, and they now comprise an important alternative to that discourse. A critical discourse about neoliberalism has tended to think about neoliberalism as economic deregulation and globalization. In this way it often has intersected with accounts of "global cities" as economic capitals and as part of a new space of financial and information flows. Foucault situated neoliberalism within a long history of the "reason of State" and of how "political economy" had become instrumental

to different "governmental rationalities" concerned with the *limits* and capacities of the Modern liberal State.

Foucault argued that a US neoliberalism (already in the 1970s) was a governmental rationality invested in the health of an "enterprise society," and a form of social administration that relied on economic assessment in (re-)evaluating noneconomic forms of behavior and programs of social welfare. As he notes, an enterprise society and its principle subject/agent (the *homo oeconomicus*) are rationalized as a maximization of rights and freedoms, rather than negatively as the loss of rights, security, and welfare otherwise accorded by the State. There are many reasons to think that, had Foucault continued to write into the 1990s, he would not have considered "neoliberalism" to be settled or transposable across nations as is often suggested when neoliberalism is cast as unimpeded global financial networks and as a new stage of global capitalism. My qualification of the term "neoliberalism" in this chapter's title represents my sense that Foucault's account of the *birth* of neoliberalism as a governmental rationality can work as a counter-point to the view that neoliberalism is primarily an economic formation, or a spatial, social, or cultural formation driven mostly by economic determinations.

There are two implications of Foucault's thought about the birth of liberalism and neoliberalism that bear on my consideration of the technologies, media, and spatial materialities of "urban renewal." One concerns his account of the city. He never wrote about the city per se, never suggested that Modernity be examined as an urban revolution, and deflected efforts to fold his histories into sciences such as Geography, urbanism, or architecture. However, he discussed the city repeatedly in his histories of the birth of the asylum, the clinic, the prison, and (in that way) liberalism. In this sense, he approached the Modern city laterally, as he does the State and economies – liberalism and capitalism. The late eighteenth- and early nineteenth-century city is the *stage* for Modern, liberal arrangements of government – for deciding the proper location of the General Hospital, the asylum, and the prison. Cumulatively, Foucault's work thus considered the Modern city as an object of reform and "renewal" – a perspective elaborated in Thomas Osbourne's history of how the nineteenth-century city became the target of increasingly multiple programs of environmental hygiene, and in Patrick Joyce's (2003) history of the nineteenth-century city as the Modern center of freedoms and liberal programs of normalization.

Unlike Lefebvre, Foucault never conceptualizes (urban) space as a determining condition of history and social relations. However, his view of power and government as a dispersion, network, and *arrangement* – the spatial rationalization of bodies, movements, knowledge, and observation – provides an important corollary to understanding the long history (the ongoing problem *and* instrumentality) of "urban renewal" in liberal government, and for recognizing the term's mattering (its discursive and nondiscursive formation) historically in specific nation-states. The remainder of this chapter

contemplates four historical conjunctures of media and urban renewal, in part as a history of the present conjuncture, as an alternative account (a long history) of the "new media" city, and in part as a demonstration of how media have mattered in different times in different ways in the (re)production of urban space – as instruments of "urban renewal."

Advancing liberalism through urban renewal and its media – four historical conjunctures

Although the term "urban renewal" acquires a fairly technical and decidedly political tenor in the United States after World War II, its discursive formation and its deployment as governmental program at that time (and to this day) developed out of a history in which communication and cultural technologies performed a significant role. The historical outline that follows considers their *instrumentality* not simply within a history of communication media but as civic technologies in the production of the space of urban reform and renewal.

The birth of the liberal metropolis and its media

Liberalism has most often been associated with the government of the nation–state; however, by the nineteenth century the Western metropolis became (as Patrick Joyce has noted) a domain where the freedoms of the liberal subject were *most* concentrated and naturalized, and simultaneously the most active point of "reformist" policy and administration. Joyce's history of the "liberal city" underscores that the active creation of liberal subjects depended on fashioning an urban center not only as a rational space (a space of planning) but also as a *complex* of interdependent technologies for "illuminating" citizens, and through which citizens could improve themselves. The tools for cultivating liberal citizens and a "social man" included the creation of public library networks (a Central Library and its outlying "branches"). As Tony Bennett (1995) has noted, the "birth of the public museum" operated as a "cultural technology" whose spatial rationalization of exhibits and patrons' movements was integral to its civic and "governmental" mission – "enlightening," "cultivating," and "civilizing" citizens. The *naturalization* of the city center as a rationalized space of reform and enlightenment also depended on cultural technologies such as public zoos – the London Zoo in 1847, followed by public zoos in Melbourne and New York in 1860 – which were educational and civilizing spheres that spatially organized, differentiated, and made rational the free/liberal subject's relation to caged *animalia*. Often these facilities folded into one another, as when some of the first public zoos were built adjacent to botanical gardens.

To speak of the birth of liberalism as a governmental rationality is not only to emphasize a "reasoning" that played out in deliberations (policies and urban planning) but also to recognize that this rationality was produced

through particular sites that collectively comprised an effective spatial *arrangement* of government. In other words, achieving a propitious governmental arrangement involved the production of a spatial arrangement, a complex of interdependent facilities (the "mediations" and "cultural technology") of liberal citizenship. Collectively these sites and networks comprised an urban core that operated as a self-governing motor of civic reform, reproducing a "moral city" and enlightened citizen. Each site, and the power grids that connected them, contributed to the urban center's operation as a machine with interlocking "governors" – a term that, in that day, linked liberal political apparatuses to a phalanx of self-regulating devices and their networks on which Modern cities depended (Otter, 2007, 2008). It is no small coincidence that the location and (as Joyce notes) the architecture of the buildings of city administration in the city center made them organically part of the urban complex/concentration of sites, networks, and cultural technologies, each supporting the others as spaces of ongoing reform, enlightenment, and reason. The urban center became, in this sense, an object of particular spatial strategies of social welfare geared to cultivating, securing, and individualizing incentives for a civic man.

The cinema city and the birth of urban planning as liberal reform

Facilities such as libraries, zoos, museums, botanical gardens, and parks which comprised the urban core as a space of civic reform and public good continued into the early twentieth century but were *rearticulated* through an urban fabric and governmental arrangement into which new facilities such as the movie theater emerged – and through which the "cinema city" developed. The cinema city was a historical and geographic synergy between the production of urban space and the sites/spaces for producing, distributing, and exhibiting "cinema." In that this historical synergy developed through the reformist plans and programs of the liberal city, its development was materially part of strategies and problems of governance and the provision of welfare.

Although the programs of "enlightenment" and cultural uplift that Joyce associates with the *birth* of the Western European liberal city also occurred in the United States, the US city developed within a somewhat different mentality about urban planning, and with an ambivalence about Western European plans. In the United States, planning was not about "renovating" often centuries-old structures typical of Western European cities. The US programs of urban planning modeled themselves on French and British precedents, while claiming a broader and bolder canvas for urban government, civic uplift, and reform. Shaping the US city as a healthy and rational "economy" involved a stronger commitment to cities' flexibility for development (maximum reproduction and renewal), even as this commitment involved more ambitious programs of planning, particularly to achieve efficient transportation in densely populated areas in the first decades of the

twentieth century. In the United States these reforms may have been overseen by municipal government but, unlike the Paris Renovation under Napoleon III, they tended to be initiated and financed by a city's business corporation and its formal, civic associations.

One noteworthy instance where these strategies found a much broader space of operation was in turn-of-the-century Chicago. Chicago is a noteworthy site to understand how the movie theater was put to work within a new rationality and arrangement of liberal government in US cities because, at the very moment when the cinema city was born, Chicago became the laboratory – the shining demonstration – of the world's most massive program of urban planning, considered as a new *stage* of urban renewal (aka the City Beautiful) and what Charles Wacker's *Manual of the Plan for Chicago* (1912) described as "making a practical, beautiful, finished fabric out of Chicago's crazy quilt" (p. 81). The 1909 Plan for Chicago culminated out of a series of plans and projects in the decades following the fire that destroyed much of the city's center in 1871, the most notable project being the city's Columbian Exposition of 1893. Whereas the early liberal city in Western Europe and the US northeast was a collection of cultural facilities folded into one another in the urban core, the Chicago exposition magnified this trend's virtue into a resplendent (electrically illuminated and white plaster) city within the city, christened the White City – a term that implicitly affirmed the racial exclusivity of the "civilization" being secured by an urban core organized as a space of enlightenment.

The political rationality and administration of public welfare as a moral/civic project in the early twentieth-century United States involved an alliance between the new regime of planning/planners and business leaders. The Chicago Plan in particular linked "public works" to "public uplift," affirming planning's ability to secure a relatively permanent orderliness, built into the urban fabric, as a means to the city's "moral economy" – its healthy growth, unpollutedness/Whiteness, and capacity to engender a *culture* of enlightened citizens (beauty, green spaces, and arts). Its commission invoked "public uplift" as the most significant reason for the undertaking:

> This [splendid material upbuilding] is of significance only as it expresses the actual social, intellectual, and moral upbuilding of the people, and, so far as, in turn, it opens the way for development of this higher type. City building means man building.
>
> (Wacker, p. 82)

More than the early liberal city, this project assumed that enlightenment was not located in any one public cultural facility but in their interstitial and connecting sinew – in every building block of urban renewal as civilizing program and public welfare.

Establishing and circulating a rationale for the plan involved multiple *media* and actors. The head of the planning commission, Charles Wacker,

authored *Wacker's Manual for the Chicago Plan*, which was distributed through Chicago's public schools as a civics lesson and citizenship training. The commission authorized a two-reel film, *A Tale of One City*, that circulated through Chicago movie theaters – its premier attended in some of the city's fledgling downtown theaters by government officials and business leaders. Like the manual, the film was a civics lesson about government and citizenship in a city leading the world in urban renewal. Whereas the manual documented and reproduced the vision of the plan through photographs and print illustrations, the film put the plan, the city, and government in motion.

Understanding how *A Tale of One City* mattered and materialized as an instrument in the Chicago Plan involves mapping not only its relation to a theater circuit (a circuit of film distribution and exhibition) but also the theaters' physical and material relation to the reproduction of urban space, a stage of urban renewal represented as new and unprecedented. That line of analysis could consider how the movie theater, as a specific site and platform for public and civic education traversed other networks and sites of public and civic education such as the schools and libraries through which Wacker's manual was distributed. The analysis also could consider how *Tale* inserted itself into a regime of civic education films, such as the ones cataloged in Ina Clement's *Visualizing Citizenship* (1920), which were integrated into feature-length exhibitions at the downtown theaters as well as across other exhibition sites.

The emerging downtown theaters in Chicago, and other US cities, may have developed for a relatively specific function – to show films. However, their architectural design (often in the neo-classical style of other public cultural/educational facilities) and their concentration in particular zones of the city made them building blocks of urban renewal. The Chicago Plan recognized the importance of and accommodated places for "recreation," though in so doing it mostly emphasized public parks. The large downtown movie theater, as a building/facility that could stand amidst the cultural and recreational institutions of the Chicago Plan, improving on the immorality of smaller, earlier nickelodeons, mediated the space/distance between public recreation and public education – as public good and welfare. And more than early twentieth-century neighborhood theaters, and the future rise of the suburban theater, the downtown theaters were, for a time, central to realizing public works, public welfare, and a public good.

Rising above the old liberal city: the radio city and liberalism's air space

The Chicago Plan emphasized the administrative and cultural center of the city, not only by clearing a massive open/public space in the city center and by encircling the center with concentric rings of park space but also by designing a transportation grid (of streets, rails, and harbors) that made the city center a meeting point – a hub on a wheel of radiating spokes, put in

motion by modern transportation vehicles. The radial city in this plan promised a solution to the city as a space of crowds and "congestion" by distributing public spaces and expediting movements through the city. European urban planning (most famously the Paris renovation) early conceived of the health of the liberal city as a rationally articulated and communicative space whose free-flowing arteries of transportation could relieve "congestion" and assure both orderly and maximum movement.

The Chicago Plan, and successive planning in the United States through the mid-twentieth century, became absorbed (arguably more than in Europe) with the efficiency of urban transportation, particularly in its relation to a discourse about urban "congestion." The strategies of *laissez passer* (unimpeded movement) became a more central preoccupation for US cities where the commitment to public forms of transportation, as one form of public welfare/service, was giving way to private forms of transport more rapidly than any place in the world. To the extent that the (privately driven) plans for US cities in the first half of the twentieth century were preoccupied with reorganizing the city as an efficient network for public and private transportation, the reasoning about civic improvement increasingly became oriented toward the city as a healthy ("uncongested") circulatory system to which every citizen (as a pedestrian, passenger, or driver) contributed through their movements.

In these respects, the spatial and governmental rationality of the early twentieth-century city not only emphasized the beauty and scientific management of a civic center but also the unity and *economy* of the city radiating from that center, made possible through networks and grids for increasing the ease and efficiency of *communication* from one part of the city to another, and between the center and all its parts. The "radio city" was born through this spatial arrangement and rationality for liberal government, welfare, and reform – through the earlier ideal of the radial city. By the 1920s radio had become a buzzword for electromagnetic waves that "radiated" from a center-source outward. Over the 1920s and 1930s, radio became the invisible but audible and felt connectivity of the city as communicative space, and communicative space operated as an emerging space of citizenship and civic progress. As radio companies formed in/from United States cities, the city became a space of "broadcasting" – a term that referred in early years to the wholeness of an urban market, population, and citizenry through radio transmission. The national connectivity that began to occur by the late 1920s was initially an expansion of the radio city – of the nation modeled as radio city and of national broadcast space comprised of radio delays between cities.

Radio transmission "covered" urban space through "air waves" and "air space," a term that by the 1920s referred to both flyover space and radio space (Hay, 2012). Radio transcended earlier urban space, even as the radio city became a purer and more efficient way of achieving the radial city. Signal strength, and the location of transmitters, maximized range – with

high-signal strength allowing radio transmissions to penetrate or circumvent tall buildings that increasingly comprised the US city at the time of radio's rapid emergence. Over the 1920s and 1930s, fledgling radio broadcast companies sought the highest buildings from which to transmit in cities. In Chicago, the Chicago Daily News' new radio wing, WMAQ, began broadcasting in 1922 from the La Salle Hotel, then the tallest building in downtown Chicago, while the same year WGN began broadcasting from the Wrigley Building in the city's center. In New York City, Lee de Forest engineered one of the first public broadcasts to that city in 1910 from New York's Metropolitan Opera House, thus acting on/through the (relatively exclusive) cultural facilities in the city's center. By the 1920s and 1930s, fledgling radio companies in New York transmitted from the Metropolitan Life Building (then the city's tallest); both the Chrysler and Empire State Buildings were designed with spires for radio broadcasting. The construction of Rockefeller Center as the headquarters of Radio Corporation of America and its subsidiary National Broadcast Company encased the building's public center, the Radio City Music Hall, and became the hub of New York as the world's paradigmatic radio city.

The radio city was not separate from, or more important historically than, contemporaneous city newspapers and urban telephone networks, because often they developed and operated interdependently (as when the Chicago Daily News and the Tribune Company added radio divisions). Collectively and interdependently, they reorganized the US city as communicative space, and reinforced a relation between urban communication and transportation. The liberal city's organization for enlightenment depended more than before on networks for radiating/dispersing civic knowledge, albeit from an administrative and cultural urban center outwards. However, the radio city (more than the city newspaper and telephone network) acted on the transcendence of liberal government through the free-est, most unfettered means – an air space that supposedly solved the problem of urban congestion.

One of the most vivid paradoxes of the radio city as a space/strategy of urban welfare and reform was its contemporaneous relation to an emerging discourse, policy, and implementation of urban renewal as arteries of rapid transport that cut up the city, erasing earlier zones and displacing some of the most impoverished populations. The project of maximizing the city as communicative space was not simply about transcending terrestrial impediments through radio; it encouraged expanding the corridors of transportation to the city's furthest and newest edges. "The City," a film presented at the 1938 New York World's Fair, projects the solution to the social ruination engendered by urban congestion and alienation (the unhealthy social body) onto a hyper-rationally designed edge-"community" navigated through a first wave of "free-ways." The film's exhibition in New York was no small coincidence since that city (led by Robert Moses) was undergoing one of the most massive urban roads projects in the world, connecting Manhattan to its boroughs, and particularly after World War II to the

rapidly growing suburban areas. Whereas early in his career (1920s–1930s), Moses had been a leading agent in the creation of numerous city parks, his later career was marked by construction of the city's expressways – the Bruckner, the Staten Island, the Cross-Bronx, the Long Island, the Major Deegan, and the Brooklyn-Queens Expressways. New York City's planning program recast urban welfare and reform (the reinvention of the liberal city) with twin aims: the aim of an "expressway city" and "commuter city" and of slum clearance and public housing as a robust program of urban "redevelopment." Both were considered (not incommensurate) liberal virtues of, and part of the legacy of, the radio city as a new spatial and governmental rationality.

The televisual city and mass suburbanization as liberal ideal

Many accounts of television emphasize its development in the second half of the twentieth century as a *national* broadcast medium. TV's culture, commercial potential, and governmentalization all are typically construed as a national, nationalizing, and/or nationalistic project. Hence the geography of television tends to map TV's reach as reinforcing or leaping over national borders, complicating national sovereignty. Some (particularly critical and cultural studies) accounts of TV have mapped a more complicated geography through its historical relation to house and home, and along this path to "homeland" (Morley, 2000).

In the United States, TV developed as a broadcast medium for and from cities and continued to be a profoundly urban medium (mediated through cities) that loosely conjoined national broadcasting and subsequently cable/satellite networks. TV's metropolitan orientation was partly a legacy of earlier synergies between the liberal city and its media such as radio, city newspapers, and telephony – media that were supposed to have brought progress, modernization, and reform in solving urban problems, making cities more communicative, and advancing liberalism from the city's core outward. However, this is where TV's relation to the residual regime of urban reform gets complicated. TV became a founding condition of the mass suburbanization that dramatically reshaped US cities in the second half of the twentieth century, accomplishing (building on top of) earlier strategies of urban renewal by leaving behind the urban core. However, TV also bore a significant (and seldom acknowledged) relation to the emergence of a governmental discourse and program objectified as "urban renewal," which targeted the urban core that TV helped evacuate.

Accounts of TV's instrumentality in mass suburbanization often have acknowledged Raymond Williams' point that TV emerged through a regime of mobility and privacy – what he termed "mobile privatization" – rather than simply as an outcome of communication institutions or the invention of communication technologies (Williams, 1976/1992). For Williams, TV's

(or other communication technologies') birth can not be understood simply as an outcome of "media history" but through a historical relation to the changing models of domesticity/privacy and mobility. TV's relation to a contemporaneous mobile privatization comprised, according to Williams, a new way of life situated increasingly "at a distance" from earlier urban and rural environments as well as from one's neighbors. Though he does not offer an explicit accounting of mass suburbanization as White-flight from the urban core, or as the mass migration of populations from the earlier zones where cities had been concentrated in the United States (the northeast and upper midwest) to the southern and southwestern zones of the United States, his historiographic strategy is salient for understanding the new telegeography in the United States, particularly how TV broadcast networks were assembled (differently than radio) through a massive reorientation of *urban* geography. As I have noted in earlier work, *tele*-vision (vision "at a distance") and its imbrication in a regime of mobility and domesticity suggest an emergent spatial and governmental rationality – one that valued the "privatization" as "auto-mobilization" of government, and what Nikolas Rose, in a different way, has referred to as "governing at a distance" (Rose, 1999; Hay, 2003).

Recognizing TV's mattering/materialization as part of an assemblage of technologies of "self-government" and of "governing at a distance," and as instrumental in this way to the spatial arrangement/production of liberal government, helps highlight TV's historical and geographical relation to the discourse and policy initiatives about "urban renewal." Whereas the US Housing Act of 1937 "linked slum clearance and public housing in one program, focusing on the treatment of urban blight" (U.S. Department of Commerce, 1974, p. 1), "urban renewal" became the key word in the rationales of the Housing Acts of 1949 and 1954 – a period when the energetic productivity of mass suburbanization began to require an equally broad response (a "total solution") to the urban cores that were being evacuated in a mass migration to suburbs. Rationalized as a comprehensive strategy, "urban renewal" sought to incentivize various stake holders in local projects, often sponsoring the formation of leagues, councils, commissions, and committees comprised of representatives from various municipal and commercial institutions as well as nonprofit civic associations. Urban renewal thus became a rationale for coordinating a network of public–private oversight ("government" in the Foucaultian sense), mobilizing entities such as the Build America Better Committee, the Citizens Committee for Urban Renewal, and the Friends Self-help Housing of Philadelphia. These collectivities of activists/agents primarily produced printed "guides," brochures, and handbooks for making renewal rational (i.e., developing a plan of action and review).

Within this transformation and rearrangement, the vestiges of the cinema city and its relation to nineteenth-century cultural facilities became problematic spaces – indices of blight, degeneration, and the need for urban

renewal. The old movie palaces in the urban core survived for a limited period as porn theaters. The provisional status of drive-in movie theaters setup along the urban frontier's outer edges and outside the urban core in small towns carried the cinematic city forward, even as it rearticulated it to a new regime of mobile privatization whose suburban technology is the "multiplex" cinema attached to the shopping center (an anchoring space in the poly-centrism of the TV city).

Like radio during the 1930s and 1940s, television operated across, throughout, and in a certain sense above the city, but unlike the radio city, television reorganized and represented the life/growth (the biopolitics) of the city's newest zones against the backdrop of "blight" and the "darkness" of an "inner city." By the 1960s and early 1970s, urban stations and their national affiliations became circuits for *re*-distributing urban renewal, as a project targeting increasingly expansive areas of the urban core but always integral to (as a dark shadow and the corrective moral economy created by) the broadly cast media of mass suburbanization. The representation of the newly settled suburbs as a setting for TV domestic comedy during the 1950s thus operated in synergy with (albeit on a different register than) TV crimes series set in the inner, decaying "noir-city" – for example, *Peter Gunn* as the noir-ish antipode of the Nelson, Anderson, and Cleaver neighborhood. By the early 1970s, the strategies for reassessing and even reclaiming the liberal city's core occurred through TV on multiple fronts: Norman Lear's TV cities (the mixed-race row-housing of *All in the Family*, the "east-side" condo where the Jeffersons "moved on up," and particularly the "ain't we lucky we got-em" *Good Times* of Chicago's public housing projects), Mary Tyler Moore Production's resettlement and refurbishment of pre-suburban zones of Minneapolis in *The Mary Tyler Moore Show* and some of its spin-offs, Public Broadcasting Service's (PBS) fashioning of neighborhoods such as Mr. Rogers' and Sesame Street which were oriented to learning the rules of cooperation and teamwork and which reproduced many of the rationales of the political and technical discourses of urban renewal. The PBS programs represented a mythic, future-oriented city – a city that was utopian because it was no place and every place, and that was seminal because it was in the early throes of renewal as a televisual public education of a new generation of children and their citizen parents. These PBS children's programs operated alongside TV news and documentaries, such as CBS's "Special Report – The Cities" (1968) and the New York City PBS-affiliate's "People Power," that represented "urban renewal" in real and specific US cities.

These TV programs affirmed that even though television was instrumental in mobilizing (a *mobile privatization* of) urban expansion, it also was capable of demonstrating the techniques/experiments of renewing and infilling the residual, eroding space of the urban core. Because TV rapidly had become a technology of mass suburbanization, TV productions such as these contributed to imagining, increasingly *from* the suburban settlement, a

future resettling of the urban core as a space knowable and available to suburbanites and tourists. In New York, a local program such as "People Power" represented to the city's burrows (and not simply outlying suburbs) models and strategies whereby citizens were performing, and acting through, the new political programs for governing cities through "urban renewal."

Why a historical geography of the liberal city and its media matters now

There is a long history of liberalism that continues to shape the present, and the remnants of that history are the materials through which the present production, renewal, and governmentalization of the liberal city and its media occur. The historical geography sketched in the previous sections underscores that the arrangements and programs targeting the city as a problem space have been messy and contradictory, that historical projects of the liberal city have lacked clean breaks from the past (the liberal city as laboratory for the play of emergent and residual strategies), and that specific cultural and communication technologies (as networks, technologies, and media of government) have materialized and mattered within the reproduction and renewal of the liberal city as a spatial and governmental arrangement.

This path of analysis is an alternative to accounts of a "neoliberal city" that cast neoliberalism as a space produced primarily through economic determinations (Brenner & Theodore, 2003; Davila, 2004; Hackworth, 2006; Harvey, 2007). The analytic that I am proposing also is an alternative to studies of media and cities. Whereas urban sociology and urban geography often generalize "media," media historians have been slow to explain the historical and geographic relation between media and (urban) space, and even slower to explain how media matter within governmental networks, rationalities, and spatial arrangements. To the extent that a discourse about "neoliberalism" figures into Media Studies, it typically appears as general, secondary referencing of the political economy and sociology cited above. So while this chapter is engaged in a conversation about neoliberalism, its turn toward the historical intersections of liberal government and the city not only recognizes how "media" matter within these articulations and conjunctures but also how "media" have been put to work within the emergent and residual technologies and networks of government. This historical geography of the "birth" of the current liberal city and its media should help underscore that the current *mediation* of the city makes that city "neoliberal" in its relation to a history of the reproduction of urban space (strategies of "urban renewal") as a governmental arrangement. With that in mind, let me conclude with several brief observations about the problems and contradictions on which the current liberal city is being restrategized, remade, and "advanced."

First, as the discussion above of the "TV city" demonstrates, the technical discourse and the policies about "urban blight" and "urban renewal" are

coterminous with the history of broadcast television, roughly from the late 1940s through the 1970s. The erosion of the spatial arrangement and economy of "broadcasting," the rise of "narrowcasting," and the current convergence of cinema, radio, and TV with "interactive" media whose hybrid forms often are generalized as "new media" all have strengthened a new arrangement of liberal government – one where the political and sociological discourse of "blight" and "urban renewal" is gradually replaced with a discourse about urban "obsolescence" and "enterprise" (e.g., the G. H. W. Bush administration's targeting of urban "enterprise zones," the Clinton administration's creation of a program for Empowerment Zones and Enterprise Communities, and the G.W. Bush administration's vision of an Ownership Society). The assumption that an "information city" involves the *transcendence* of the physical city through "new media" (as William Mitchell's *City of Bits* imagined in the 1990s) was in many ways congruent with the political and governmental discourse of urban obsolescence and enterprise. The discourse of obsolescence and self-enterprise underpins the valorization of personalized/customized mobile media (particularly GPS) for navigating the expansive, unknown, or risky territory of cities.

Second, the *resettlement* of the urban core (what Neil Smith has referred to as "the new urban frontier" and what Andres Duany and his cohorts christened as the New Urbanism) involved a more robust exercise of the governmental rationality of "public–private partnerships" and "entrepreneurial citizenship" represented by one-time TV specials such as "The Cities" and very localized TV programs such as "People Power." In the valorization of enterprise, the liberal virtue of freedoms (breaking the chains of enslavement) translated into initiatives that supposedly "empowered" cities and their states, while making cities more reliant on partnerships with corporate and nonprofit providers of services. In the United States, this reinvention of liberal government involved refashioning the cinema city by repurposing the remnants of cinema theaters within programs to "gentrify" and "reclaim" the downtown as a revitalized center of a new business and governmental arrangement (i.e., an arrangement oriented to entrepreneurialism and public–private partnership). The theaters also hinged together a new arrangement of urban government, as focal points of civic pride and of displaying the accomplishments of public–private partnerships (Jones, 2001; Stenger, 2001). Recognizing how the current liberal city acts on the old materials of the cinema city, and is born out of the role of the television city in making the downtown an object (from the suburbs) of pathways to a new regime of urban renewal, complicates the discourse of modernization that has cast the "neoliberal city" as a "new media city" – or, to use John Hannigan's (1998) expressions, a "postmodern metropolis" and "fantasy city."

Third, the TV city is not replaced with a "new media city"; rather, it is reinvented through the networks of government discussed above and powerfully through the rise of programming about the "makeover" of home,

neighborhood, and town as spaces of a new model of citizenship. To the extent that Reality TV became a new paradigm in the current mediascape, its emphasis on "makeover" as an objective and array of techniques of self-improvement made it highly instrumental for the current rationality about liberal government and citizenship. Examples include *Extreme Makeover: Home Edition* and shorter-lived Reality TV programs about the "recoveries" of towns (*Town Haul*), struggling cities' experiments to "reinvent government" (Cory Booker's Newark, NJ in *Brick City*), the government of affluent private communities (the format launched by *Real Housewives of Orange County*, and the controversy surrounding the never-broadcast *Welcome to the Neighborhood*), the government of middle-class neighborhoods (*There Goes the Neighborhood*), the partnering of TV and city government to stage police sting operations (*Cops, To Catch a Predator* and *Police Women of Dallas*), and the everyday government of urban environments (*Parking Wars*). Collectively these programs provide an array of technical demonstrations and experiments for contemporary liberal government's current response to urban renewal (Ouellette & Hay, 2008).

The proliferation of these programs over the first decade of the twenty-first century bespeaks the economic value and political virtue of reinventing TV as a stage/laboratory for reinventing government. However, they also affirm a growing precarity and coming crisis of the current liberal city. The proto-documentary TV comedy *Parks & Recreation* represents the utter dysfunction of municipal government, its citizens' profound cynicism about the capacity of municipal government to work for them, and the cartoonishness of the rationality of the public–private partnership – particularly in a small city that increasingly is expected to provide services with limited State resources and to display an entrepreneurialism in lining up private, contracted providers (Hay, 2010a). The precarity of the current liberal city lampooned in *Parks & Recreation* also has been evident in television and related media's role in *managing* recent financial crisis. Following the Bush-era's valorization of an Ownership Society, a regime of customizable media facilities were designed to aid the enterprising citizen–consumer whose estate became the inflated collateral and currency of a "housing bubble" and its subsequent bursting (Hay, 2010b). As the transactional reality of a new *homo oeconomicus*, these media supported a "subject of interest and investment" that gradually became a crucial contradiction and eventually a crisis in the Bush-era rationality about the means of urban renewal. Since the crisis years of 2007–2009, however, there also is evidence that this nexus of media technologies is becoming integral to programs for "renewing" cities (one property owner at a time) through a new "moral economy" – a new (?) reasoning about the responsibilities, ethics, and role of the State and corporate/financial institutions, in consort with their consumer–citizens, in "recovery." Any response to the current crisis involves recognizing not only that the crisis is unprecedented (i.e., it is specific to the current arrangement and crisis that urban renewal acts on) but also that the crisis is

part of old contradictions and a changing geography of liberal government and its technologies for urban renewal.

Note

1 "On Governmentality," Lecture Four, February 1, 1978, pp. 85–115, in Foucault (2007).

References

Tony Bennett, *The Birth of the Museum*, London: Routledge, 1995.
Neil Brenner & Nik Theodore, ed., *Spaces of Neoliberalism*, London: Blackwell, 2003.
Ina Clement, *Visualizing Citizenship – Special Report No. 4*, City of New York: Municipal Reference Library, June 23, 1920.
Arlene Davila, *Barrio Dreams: Puerto Ricans, Latinos, & the Neoliberal City*, Berkeley, CA: University of California Press, 2004.
Michel Foucault, *Security, Territory, Population: Lectures at the College de France, 1977–78*, London: Palgrave-Macmillan, 2007.
Michel Foucault, *The Birth of Biopolitics: Lectures at the College de France, 1978–79*, London: Palgrave Macmillan, 2008.
Jason Hackworth, *The Neoliberal City*, Ithaca, NY: Cornell Univ. Press, 2006.
John Hannigan, *Fantasy City*, London: Routledge, 1998.
David Harvey, "Neoliberalism & the City," *Studies in Social Justice*, vol. 1, no. 1 (Winter, 2007), pp. 2–13.
James Hay, "Locating the Televisual," *Television and New Media*, vol. 2, no. 3 (August, 2001), pp. 205–234.
James Hay, "Unaided Virtues: The (Neo)Liberalization of the Domestic Sphere & the New Architecture of Community," *Foucault, Cultural Studies, & Governmentality*, ed., Jack Bratich, Jeremy Packer, Cameron McCarthy, Albany, NY: SUNY Press, 2003.
James Hay, "Toward a Spatial Materialism of the 'Moving Image': Locating Screen Media within Changing Regimes of Transport," *Cinema & Cie*, no. 5, fall 2004 (special issue "Transitions," ed., Francesco Casetti), pp. 43–52.
James Hay, "From a Cultural Materialism to a Spatial Materialism: Communication, Culture, and Transport Revisited," *Communication, Transportation, Culture: Working with James Carey*, ed., Craig Robertson & Jeremy Packer, London: Peter Lang, 2005.
James Hay, "Statecraft, Spycraft, & Spacecraft: The Political Career of a Popular Hero in Outer Space," *Secret Agents: The Many and Changing Faces of a Popular Icon*, ed., Jeremy Packer, London: Peter Lang, 2009.
James Hay, "Television & Everyday Networks of Government," *Post-Global Network and Everyday Life*, ed., Levina M. & Kien, G., London: Peter Lang, 2010a, 149–176.
James Hay, "Too Good to Fail: Managing Financial Crisis through the Moral Economy of Realty TV," *Journal of Communication Inquiry*, vol. 34, no. 4 (October, 2010b), pp. 382–402.
James Hay, "The Invention of Air Space, Outer Space, and Cyber Space," *Down to Earth*, ed., Lisa Parks & James Schwoch, Piscataway, NJ: Rutgers UP, 2012.
Janna Jones, "Finding a Place at the Downtown Picture Palace, The Tampa Theater, Florida," *Cinema & the City*, ed., Mark Shiel & Tony Fitzmaurice, London: Blackwell, 2001.

Patrick Joyce, *The Rule of Freedom: Liberalism & the Modern City*, London: Verso, 2003.
Henri Lefebvre, *The Production of Space*, London: Blackwell, 1991.
Henri Lefebvre, *Everyday Life in the Modern World*, New Brunswick, NJ: Transaction Publ., 1994.
Henri Lefebvre, *The Urban Revolution*, Minneapolis, MN: University of Minnesota Press, 2003.
Walter Moody, *What is the City?*, Chicago: A.C. McClurg & Co., 1919.
David Morley, *Home Territories: Media, Mobility, Identity*, London: Routledge, 2000.
Chris Otter, "Making Liberal Objects: British Techno-social Relations, 1800–1900," *Cultural Studies*, vol. 21, nos. 4–5(July/September 2007), pp. 570–591.
Chris Otter, *The Victorian Eye: A Political History of Light & Vision in Britain, 1800–1910*, Chicago: University of Chicago Press, 2008.
Laurie Ouellette & James Hay, *Better Living through Reality TV*, London: Blackwell, 2008.
Nikolas Rose, *Powers of Freedom*, Cambridge: Cambridge UP, 1999.
Josh Stenger, "Return to Oz: The Hollywood Redevelopment Project, or Film History as Urban Renewal," *Cinema & the City*, ed., Mark Shiel & Tony Fitzmaurice, London: Blackwell, 2001.
U.S. Dept. of Commerce–Real Estate Research Corporation, *Legislative History of Urban Renewal*, Washington, DC: National Technical Information Service, 1974.
Charles Wacker, *Manual of the Plan of Chicago – Municipal Economy*, Chicago, IL: Chicago Plan Commission, 1912.
Raymond Williams, *Television: Technology & Cultural Form*, New York: Schoken Books, 1976/1992.

Part III

Communication assemblages/networks

Brainwash (Dishwasher, books, circuit boards, laptop, and Google. Filtered knowledge). Francesa Talenti.

Chapter 9

Beyond transmission, modes, and media

Jennifer Daryl Slack

This is not the first time communication has had to rethink itself to remain vital. Faced with the inability to substantiate media effects, Bernard Berelson, one of the "founding fathers" of communication, observed in 1959 that the field was "withering away" (Berelson, 1959, p. 1) and all the interesting people had either died or left the field for other disciplines. His epitaph includes an odd feature: after proclaiming that the field has "worn out" after 25 years of "great ideas" (p. 6), he offers "seven current lines of which some may develop into the major focuses of the years ahead" (p. 5).[1] Berelson's lament reveals a *longing* for a time when big questions and great ideas were agreed upon; a *resistance* to new directions and questions, for they are not communication; and an astute *recognition* that the field must change.

Berelson's lament is instructive, for the field of communication, which clearly did not wither away, is once again experiencing a loss of agreed upon big questions, resistance to move in directions that do not *look* like communication, and recognition of the need to do so. Not the first time, and not the last time. To remain vital the field of communication must be willing to respond to changing conditions of existence with theoretical tools that both respond to and constitute communication in new ways, with new ways of conceiving its object(s) of analysis. Put quite simply, in spite of material and intellectual exigencies that compel us to rethink communication, and abundant evidence that the concept of communication is far from settled (see, e.g., Shepherd *et al.*, 2006), the field struggles with its loyalty to what it has accepted as the big questions and great ideas, which I shorthand here as "transmission, modes, and media."

Setting aside my belief that it has probably always been so, we clearly are living through an extraordinary moment.[2] This is not to claim, as many currently do, that we are in the midst of a technological revolution that is changing everything. Rather my contention is that what makes the time extraordinary are major transformations – made possible by both material and intellectual conditions of contemporary life – occurring in the articulation of structures, practices, materials, affects, and enunciation. These transformations enable reimagining who and what we are and might become, and what communication might mean. This reimagining, which is apparent

in the practices of medicine, law, and economics, especially in relation to biotechnology, can be mapped in the interstices of the cognitive sciences, the philosophy of science, new media studies, and science, technology and society. There is no single version of this emergent reimagining. It is, rather, a convoluted and complex cultural process, developing unevenly in different guises with a variety of motives.

The approach to communication I propose is inspired by and draws on the Deleuzian concept of "assemblage," an approach that helps us to think the materiality of communication outside of the problematic of representation that invests the triumvirate with its monopoly over communication. In challenging the dominance of representation, assemblage decenters (in the sense of rearticulates or deterritorializes) the transmission of meaning; it decenters the media, the channels of communication by which meaning is transmitted; and it decenters modes, the mediated cultural arrangements by which shared meaning is expressed. Assemblage, understood as an intermingling and arrangement of heterogenous elements – structures, practices, materials, affects, and enunciation – resists the dualism of the material and immaterial and suggests a conception of communication that attends to the conditions of possibility within which these interminglings occur and are effective.

Communication's comfortable attachments to communication as transmission, modes, and media affectively resist the difficult intellectual work required by this reimagining. Without doing that work, however, the field of communication risks being left behind as other, more forward looking disciplines take up these issues. In this chapter, I explain how and why we are held back by this triumvirate and how the conditions of contemporary life can be used as a path to productively reimagine life, matter, and communication. We can contribute our considerable collective intellect to this project if we are willing to move beyond loyalties to certain old ideas and practices that constitute communication theory. We need, in a sense, to do communication outside communication.

"What we disingenuously pretend they merely describe"

Transmission, modes, and media

Scholarship is produced in and shaped by our historical context: of that most of us would agree. It is more difficult to take in fully the significance of James Carey's assertion that "our models of communication … create what we disingenuously pretend they merely describe" (Carey, 1989, p. 32). The more potent point is that our models shape reality, even when we do not own up to it. We pretend that they merely describe, even though any model or theory variously shapes our interventions in the world in particular, contingent ways.

It is interesting to note that Carey's remark appears in the article that contains his quintessential critique of transmission and his proposition that we think in terms of communication as ritual. "A Cultural Approach to Communication" is among the most cited articles in the history of communication research: the article we cite to demonstrate our allegiance to having left transmission behind. Yet, for all the ritual(!) disavowals of transmission, we are still deeply committed to it. Lasswell's (1948) "Who says what in which channel to whom with what effect" and Shannon and Weaver's (1949) cybernetic model adapted by Schramm (1954) and others as sender, message, channel, transmission, and receiver – even with the complicating factors of encoding, decoding, feedback, and an elaborated context – are alive and well in our understanding of communication.

This commitment is surprisingly apparent in the research tradition I call the "modes of communication." Modes, an approach that we might say extends back to Plato and which to some degree includes Carey himself, distinguishes between three eras (or modes) of communication: orality, literacy (subdivided into script and print), and the electronic. At least that is how the three eras were characterized pre-digital, when the theory drew heavily on the work of Harold Adams Innis (1951, 1972), Walter Ong (1967, 1982), Eric Havelock (1982), and Marshall McLuhan (1967). A crisis of sorts was provoked by the appearance of the digital, the problem being first, that the electronic and the digital are not coterminous, and second, that the digital exceeds what modes is prepared to predict. To render the digital intelligible, the field has generally taken one of two positions: either discipline the digital to fit into the story of modes, or treat the digital as a wholly new fourth era and ignore hundreds of years of communication history and theory. It may be that the electronic and the digital will eventually be seen as two phases of a third era, the same way that script and print are seen as two phases of the literate era.

Most communication textbooks – the means by which a new generation of citizens and scholars learn what communication is and how it works – take the path of discipline. They are typically organized by considering orality, literacy, the electronic (including telegraph, telephone, radio, TV, and film), and then new media (video games, the internet, etc.) and/or the new digital convergence across media. The section on new and convergent media, once just a single chapter, keeps bursting at the seams, getting longer and more difficult to integrate into the preceding chapters. Increasingly, the new media section has become a textbook of its own.

The second approach, more in evidence in popular writing or in work generated outside the field of communication, treats the digital era as distinctive and is more comfortable dealing with technology beyond traditional media, with biotechnology and nanotechnology, for example. It is thus unhampered by the disciplining work of modes at the same time that it remains unenlightened by the long history of theorizing in communication (see, e.g., Weinberger, 2007). The relevant point is that the variables that

have been used to characterize orality, literacy, and the electronic do not seem sufficient to comprehend the digital. As Gregory Seigworth has suggested, it may well be that "the digital as code was there all along: just unnoticed beneath the conceptual/disciplinary blare of traditional and new media studies." This suggests that "code is constitutive and not merely symbolic or representational in the way that the electronic mode got taken up and taught" (Seigworth, 2011). Yet, there is good reason not to abandon all that we have learned. We ought to be cautioned by Lawrence Grossberg's reminder that the most difficult task (in conjunctural analysis) is to determine "What is new? What is old? What is rearticulated?" (Grossberg, 2010, p. 60). Communication scholars might be advised to think in terms of rearticulating our vast knowledge of the field given emerging conditions of existence. Modes, while not irrelevant, no longer serves as the generative organizing principle it once was.

Modes has become, in a sense, the backbone of communication studies. It drew our attention away from the "effects of the message" so prominent in transmission and argued instead that a whole way of life is what matters: conceptions of time and space; how relations of power and authority are organized; the role of memory; the relationship between the acoustic and the visual, what is valued and what is not; and so on. These have essentially become the dependent variables in a deterministic model that characterize progressive modes of communication and function as constraints on what we can see and attend to.[3] Further, the character of each of these ways of life is given shape by what amounts to a single, independent variable: the technology of communication. In a sense, modes does little more than shift our attention to a particular component of the transmission model: from the message and its effects to the channel and its effects. How does the world change when we communicate using the channels of literacy: script and print? Using electronic channels: telegraph, telephone, radio, TV, film? And now using digital channels: computer, smart phone, RFID? This way of conceptualizing communication articulates powerfully with a culturally pervasive technological determinism and a sense of progress as equated with the development of new technology. While it was clearly not the intention of Innis, Ong, Havelock, and Carey to support the notion that the movement through the various modes represented progress, it is difficult to encounter the unfolding story of modes in communication textbooks without reading it that way. At best you can read against the grain.

In addition to the insidious assertion of transmission, technological determinism, and a commitment to progress, the modes approach perpetuates the assumption that a unique category of technology – communication technology – is essentially responsible for the shape of culture. Carey's signing on with John Dewey's advice that "of all things communication is the most wonderful" (quoted in Carey, 1989, p. 13) and his assertion (drawing on Kenneth Burke) that "reality is brought into existence, is produced, by communication – by, in short, the construction, apprehension, and utilization of

symbolic forms" (p. 25) bequeaths a concept of culture as representation, and by extension, as produced by the technologies we understand to encode meaning. The weight of word, image, and text weigh heavily on us. When the modes approach was developed these technologies were understood to be media: technologies that mediate messages between senders and receivers, the legacy from transmission.[4] This understanding is rendered unacceptable in light of the work of the digital, the biotechnological, and new conceptions of heterogenous species. The new technologies and new ways of conceptualizing heterogenous relationships not only involve the production of meaning, but they also entail much richer material practices and concepts of coding and protocol. We are not only talking anymore about transmitting meaning using codes. We are also talking about coding and conceiving of life, matter, and communication. These conditions are, or at least they can be for us, the game changers. If our goal as scholars of communication and technology is to understand culture and technology and view these through the lens of something we call communication, we must look beyond the special category of media and break away from the disciplinary straightjacket of modes.

Communication encounters biotechnology, cyborgs, and companion species

Encounters with the changing material and intellectual conditions of contemporary life ought to urge us to reimagine what communication is and how it works, and how we understand bodies and identities, including the identity "human." Of the many contemporary, material conditions/practices and intellectual conceptions that ought to compel us to rethink the project of communication, I suggest that these three figure prominently: biotechnology, the cyborg, and companion species. Their progressive consideration makes salient the obsolescent nature of conceptions of communication that foreground humans interacting with one another using technology to facilitate the exchange of meaning. Each also makes salient the need to consider communication beyond an allegiance to media.

Biotechnology

Whether you envision biotechnology as a practice (e.g., in medicine), an arena of regulation (e.g., in law or policy), a messianic opportunity (as in the work of Pierre Lévy, 1997), or a new medium (as in the work of Eugene Thacker, 2004a, 2004b), there is growing agreement on this: biotechnology works with and rethinks the body on a molecular level. As Nicholas Rose writes, "It is now at the molecular level that human life is understood, at the molecular level that its processes can be anatomized, and at the molecular level that life can now be engineered" (Rose, 2007, p. 4). In biotechnological practice, the homogenous, unified body recedes, becomes secondary,

almost disappears altogether, and is supplanted by a networked or distributed body dispersed and shaped by technical, legal, political, social, and cultural practices, codes, and protocols. Protocol, as Alexander Galloway (2004) explains, is a diagram that enables things to happen and involves codes. It is most obviously a control mechanism, but it is also a management style, a technique for managing the contingent environment and "*a language that regulates flow, directs netspace, codes relationships, and connects life-forms*" (p. 74). Protocols involve codes, which as Eugene Thacker explains, are "a set of procedures, actions, and practices, designed in particular ways to achieve particular ends in particular contexts" (Thacker, 2004b, p. xii).

The "body" in biotechnological practice is such a diagram: parsed, coded, engineered, bought, sold, and administered within a shifting contingent environment where codes and protocols constitute, govern, and administer bodies as sets of procedures, actions, practices, and enunciations. An early legal case that made this dramatically clear was *Moore v. Regents of the University of California* in the 1980s which determined that Moore did not "own" the cells that were removed from his body by his doctors (see Bowen, 2005). The case threw into relief the question: what is a body? And it turns out that the body boundaries we once thought sacred, what Andy Clark (2003) has inelegantly but effectively dubbed "the skin bag," are increasingly not the boundaries that matter, not in practice and not in theory. What a body "is" has become, in practice, situated in a shifting set of contingent articulations. The dramatic cultural impact of this kind of reconfiguration of the body is explored in Rebecca Skloot's *The Immortal Life of Henrietta Lacks* (2010), which maps the interdependent articulations of "skin bag," law, economics, medicine, family, and memory as HeLa stem cells derived from the "body" of Henrietta Lacks contribute to the generation of the diagram. The subjective experience of the body is independent of but integral to the diagram. Even discrepancies are integral to understanding the relationship of life, matter, and enunciation; they are part of the diagram.

From a standard communication perspective, it may seem that I have shifted the object of analysis from communication to bodies. On closer examination, however, the practice and theory of contingent bodies has enormous implications for communication theory. At the simplest level it highlights the reductive work performed in the process of identifying senders and receivers as homogenous, unified bodies. On a deeper level, it directs our attention to the molecular constitution of those molar bodies. Here I use molecular and molar in a Deleuzian sense, which neither reduces the terms to the (merely) biological nor posits their relation as one of size (see Deleuze and Guattari, 1987, pp. 208–219). Molar lines are those that overcode major dualistic oppositions, such as male and female, technology and culture, body and not body. The effect of molar lines is to identify rigid molar structures, such as the body, technology, and, for that matter, communication. Molecular lines, more supple than the molar, refer to the

myriad articulations of practices, forces, relations, affects, and enunciations within which bodies can be constituted as molar and which, in turn, are governed by molar structures. Molecular lines also serve to disarticulate and rend asunder constituted molarities.

Thacker's approach to biotechnology asserts that the biotechnological body has become, in fact, *the* relevant medium. With the term "biomedia" he resists the delineation of the body and technology as molarities in relationship. Instead, he argues, the body, as biomedia, can be thought of as a fabric of biology, concept, and technology (as in tools) tightly interwoven "into a situation, an instance, a 'corporealization.'" He explains that

> [t]he "body" in biomedia is thus always understood in two ways – as a biological body, a biomolecular body, a species body, and patient body, and as a body that is "compiled" through modes of visualization, modeling, data extractions, and *in silico* simulation.
>
> (Thacker, 2004a, p. 13)

It is always a body in process of becoming a particular body, always capable of being rent asunder. In the contemporary conditions of existence, the ontology of "life" has become especially open to interrogation and challenge in a range of ways (see, e.g., Thacker, 2010).

This material and conceptual reconfiguring of the body not only renders obsolete the relevant bodies in transmission and modes, where bodies and technologies are situated as molarities in relation with one another, but it also renders obsolete the concept of medium as a mere vehicle of the transmission of symbolic material. Even though Thacker retains the concept of media in his formulation of biomedia, it is quite different than the one we are familiar with in communication and media studies. Thacker – unfortunately – chooses to hold onto and rearticulate the notion of media, but it is not clear why we need to or that anything is gained by doing so (beyond identifying with what is comfortably – though problematically – defined as communication). The relevant point is that "bodies" (molarities of all kinds) are secured, segmented, and invested with meaning in and through relations of articulations of practices, forces, relations, affects, and enunciations. That *could* be sufficient as an object of communication studies. It is neither necessary nor helpful to label that process "media."

The cyborg

Once we acknowledge the molecular body, and the interpenetration of the molecular and the molar, we might notice that a body being molecular – as opposed to its taking a particular molecular form – is not unique to the biotechnological age. In other words, the body as a shifting set of contingent, machinic and enunciative practices and conditions is not a circumstance caused by biotechnology, but rather a more general way to understand the

constitution of bodies and identities. Biotechnology contributes the opportunity to reimagine the body in these terms. That work of reimagining is as pertinent to understanding the biotechnological era as it is to understanding earlier eras or previous modes of communication.

The point is that we have never really ever been fully independent, isolated beings, separate from our technologies. Technologies do not exist as tools (with which we transmit messages or perform tasks) wholly outside and independent of our bodies, even when they appear to exist outside the molarities we think of as "our bodies." Rather, as Andy Clark claims in his popular book, *Natural-Born Cyborgs* (2003), we have always restructured our bodies, our mental circuitry, and our social and cultural being in relation to organisms and artifacts outside of "the skin bag." We have always, in that sense, been cyborg.

As a cognitive scientist, Clark is most interested in illustrating our cyborg nature as it involves the brain. Our brains, he maintains, are "especially open to processes of deep biotechnological symbiosis" (p. 62). Our brains become what they are, in material form and function, in relation to language and other so-called tools, such as pencils, pens, paper, filing cabinets, and computers. Our brains are plastic. Given the kind of cognitive shortcuts made possible by language and other technologies, the brain builds (in an evolutionary sense) circuits and solves problems in particular interdependent relationships. Further, it does not matter whether data is stored or the work is performed inside or outside the brain – at least not in making the determination that we are cyborg, although it certainly matters in delineating the particular shape a cyborg process takes. What we are, we are in relationship to things outside our brains, outside our bodies.[5]

In spite of the popular image of the cyborg as a hybrid *thing* – a human/technology or animal/technology chimera – it is limiting to envision cyborg nature as having a body in the traditional sense at all. Although it is possible to read Clark in this more limited way, I choose to emphasize the position that our cyborg ontology is beyond what is visible. Rather, it is "woven in the rhythms and resonances of scaffoldings and dovetailings that transpire across the surface interactions of existences" (Seigworth, 2011). The processes that constitute the cyborg ontology are as much about the inorganic as the organic, as much about the incorporeal as the corporeal, and as much about the enunciative as the machinic.

Again, the implications for understanding both communication and our conceptions of the human immersed in the process of communication are considerable. Instead of imagining our brains and our bodies as somehow whole, stable, fixed agents engaged in relations of communication, the relationships, rhythms, and resonances that come to constitute those agents as if they were whole, stable, fixed agents become the objects of analysis. And these processes obviously exceed media. That and how we are cyborg is as much about chairs as it is about cell phones, as much about nonmedia technology as media technology, as much about what we conceive of as our

bodies as the physical organization of matter, as much about the symbolic as the machinic. All these interdependent weavings entail articulating life, matter, affect, and enunciation. What, given the enormity of such co-constitutive relationships, justifies limiting our study to a few technologies we have designated as the "media" of communication other than affective habit and theoretical, disciplinary, and institutional inertia?[6]

Companion species

I want to take this idea of the distributed, networked, or cyborg body one step further by emphasizing, as inspired by Donna Haraway's *The Companion Species Manifesto* (2003), that the co-constitutive relationships or mergings are not just about us (even as cyborgs), not just about individual bodies as distributed, but about relationships among a variety of mergings: the merging and emerging of organisms, the merging and emerging of the organic and inorganic or technological, and the merging and emerging of the corporeal and the incorporeal.

Haraway organizes her manifesto around an explication of the co-constitutive relationship between humans and dogs in part because "dogs are not about oneself" (p. 11). She uses the dog/human relationship – companion animals – as a way to illustrate her larger concept of companion species, in which co-constitutive relationships rule, all the way down. She argues that dogs and humans coevolved, and each is what they are in co-constitutive relation to the other. She then expands the argument to include the ongoing constitution of all aspects of what we typically think of as nature, culture, and technology. She writes:

> none of the partners pre-exist the relating, and the relating is never done once and for all. Historical specificity and contingent mutability rule all the way down, into nature and culture, into naturecultures. There is no foundation; there are only elephants supporting elephants all the way down.
>
> (Haraway, 2003, p. 12)

Co-constitutive relationships involve the merging and emerging of organisms, such as relations between humans and dogs or biogenetic relationships. To illustrate at a rudimentary level: humans and the flora of our intestines have coevolved. Human and flora are what they are "in flesh and sign" (p. 25) in the flows of that heterogenous relationship. No matter that we do not typically consider those flora as us; the "fact" of each is a production of that co-constitutive relationship. Co-constitutive relationships also involve mergings and emerging of the organic and the inorganic or technological, such as the relationship between people and pens, as argued by Clark, or between people and biotechnologies, as argued by Thacker. But co-constitutive relationships also entail the mergings and emerging of the

incorporeal and the corporeal. The partners come to be who they are in sign as well as flesh. History, myth, and the textual play a particularly important role in Haraway's accounting of the companion species. In living with animals, we inhabit their/our stories, we cohabit an active history. "That is the work of companion species" (p. 20).

Haraway artfully weaves the story of dogs in relation to "the human and non-human, the organic and technological, carbon and silicon, freedom and structure, history and myth, the rich and the poor, the state and the subject, diversity and depletion, modernity and postmodernity, and nature and culture" (p. 4). Her project exemplifies a commitment to understanding what ought to be the concern of communication: the process whereby heterogenous elements are woven together with consequences for what is and what is possible, for what is not and what is not possible.

Communication, the machinic assemblage, and the collective assemblage of enunciation

We need a more helpful concept of communication to capture the richness of what is being mapped here and to provide guidance for those following in our footsteps. We need, after all is said and done, to rewrite those textbooks. I want to offer what I think is a more generative way to think about what the study of communication looks like once we have deposed technology from center stage, broken down the distinction between technology and human, turned what we know as the human into a contingent molarity sustained by and governing molecular processes entailing the articulation of a wide range of heterogenous elements, and jettisoned an unnecessarily restrictive loyalty to media. What might an approach to communication look like that would allow us to foreground the conditions of contemporary life and still offer something unique to conversations going on around us? To illustrate what that might look like, I draw on Deleuzian cultural studies, in general on the concept of the assemblage, and in particular on the concepts of machinic assemblage and the collective assemblage of enunciation.[7]

An assemblage, *agencement* in French, refers to the dynamic collection or arrangement of heterogenous elements (structures, practices, materials, affects, and enunciations) that expresses a character or identity and asserts a territory. Assemblages bring together matter, qualities, enunciations, and affects in particular, contingent relationships that give shape to what is and what is possible. In the French video production L'Abécédaire (Deleuze and Parnet, 1996),[8] an extended conversation between Deleuze and his student Claire Parnet, Deleuze refers to the assemblage as having four dimensions: the state of things, little statements, territories, and processes of deterritorialization. The dimensions entail the following.

First, assemblage refers to "states of things," as in there is a state of things that suits us or suits a particular situation. We might think of the "states of

things" being the way things are that makes sense in a given situation. In cautioning us not to understand this too personologically, Seigworth (2011) suggests we see it "as the affective sensibility that attends to the matter-of-factness of an existence … arising in the midst of complex relations between diverse entities and flows." These states could easily include matters identified in the modes approach as the "variables" consistent with different eras. So, for example, the states of things could include the nature and feel of time, space, speed, mobility, authority, expertize, memory, ambient awareness, and so on. The relevant states of things would be determined as one looks anew at any particular assemblage, rather than being predetermined by the variables that modes has already supplied. So states of things might also include the nature and feel of the body, the treatment of nonhuman animals or genetic materials, the state of molecular enhancement of bodies with biotechnology, and so on.

Second, assemblage entails "little statements," a style or way of talking, a style of enunciation. This dimension suggests that an assemblage is characterized by the ability to say or think certain kinds of things in certain ways, make certain kinds of statements, and precludes the possibility of saying or thinking other kinds of things, making other kinds of statements. For example, we might consider the appropriate style for talking about something like privacy. We might notice that there are significant shifts in the style of and possibilities for appealing to the right of privacy in the formulation of public policy. It may well be that as the digital and/or surveillance assemblage evolves it will make no sense to enunciate claims to privacy at all.

Third, assemblage implies territories, which as J. Macgregor Wise has put it, "are more than just spaces: they have a stake, a claim, they express." And neither are they "fixed for all time, but are always being made and unmade … they are always coming together and moving apart" (Wise, 2005, pp. 78–79). Assemblages are less structures, objects, or qualities than they are lines (trajectories, relationships, and movements). They are constituted as particular, contingent molecular lines secure and undergird characteristic molar lines. Recall, as was stated earlier, molar lines shape and identify rigid molar structures, which, in turn, shape and regulate molecular relations. For example, with an awareness of the work of territorialization, we could explore how the molecular movements of fields, careers, textbook production, and commerce secure the molar identity "communication," and how that diagram shapes and regulates communication practices, education, and further theorizing in communication.

Fourth, assemblage entails processes of deterritorialization. Some molecular lines are lines of flight. That is, some forces, relations, and practices enact mutations that move out and away from, escape as it were, the territory-making work of most molecular lines. Lines of flight break up and break away from the reductive molar lines that otherwise code, rigidify, block, and subdue. Change, real change in assemblages, happens when such lines of flight burst forth "allowing something to escape, like bursting a pipe or a

boil" (Deleuze, 1995, p. 19), like the line of flight I would like my argument to enable.

In *A Thousand Plateaus*, Deleuze and Guattari (1987) explore additional dimensions of assemblage, notably for our purposes, the machinic assemblage and the collective assemblage of enunciation (pp. 75–91). For linearly trained communication theorists, it is difficult to understand that these are not poles, binaries, or distinct types, but dimensions, axes, or aspects of assemblage that function together. The work of articulating these dimensions as regularities, as an assemblage in its entirety, is attributed to an "abstract machine," defined by the "diagram" of those articulations.

Machinic assemblage relates to the state of the intermingling of bodies, actions and passions, "the aggregate of things and flows from that standpoint of actual, dimensional existence" (Seigworth, 2011). The machinic does not designate materiality as opposed to immateriality, technology as opposed to culture, but includes the corporeal, the incorporeal (which has a materiality), content, and expression (which also has a materiality). Technologies, in the narrow sense of "tool" and grasped as molarities, exist only "in relation to the interminglings they make possible or that make them possible." Those interminglings include "all the attractions and repulsions, sympathies and antipathies, alterations, amalgamations, penetrations, and expansions that affect bodies of all kinds in their relations to one another" (Deleuze and Guattari, 1987, p. 90).

Collective assemblage of enunciation relates to the machine of expression: to regimes of signs, which includes statements, acts, practices, and expressions. Enunciation is not only language or words; rather, language and words must be understood as articulated to a collective "machine of expression whose variables determine the usage of language elements" (Deleuze and Guattari, 1987, p. 90). Colored scarves worn by gang members have no direct "meaning," but they are expressions in a regime of signs; they are material and have material effects. Enunciation can thus refer to "incorporeal transformations attributed to bodies" (ibid., p. 88). To illustrate with an oft-used example: when a judge pronounces someone "guilty," the material transformation is accomplished incorporeally and attributed to the judge.

Enunciation is not a matter of the form of content on the one hand and the form of expression on the other, but a recognition of the interpenetration of content and expression. Even when one assigns an attribute to a body, "one is not representing or referring but intervening in a way" (p. 86). For example, to pronounce programming "news" or "entertainment" presupposes a regime of signs, which both produces the pronouncement and has real material effects that might include who watches it and why, how it is acted on by the audience, and perhaps even how it is regulated and funded. Deleuze and Guattari explain that:

> the expressions or expresseds are inserted into or intervene in contents, not to represent them but to anticipate them or move them back, slow

> them down or speed them up, separate or combine them, delimit them in a different way…. An assemblage of enunciation does not speak "of" things; it speaks *on the same level as* states of things and states of content…. In short, the functional interdependence of the two forms is only the form of their reciprocal presupposition, and of the continual passage from one to the other.
>
> (pp. 86–87)

We can now see that to interrogate an assemblage, we examine the interpenetration and articulation of the machinic and enunciative (the work of the abstract machine), attending to the segmentations of the form of content and the form of expression. We attend to how the assemblage expresses the state of things and makes certain kinds of statements possible. But most significantly, we can interrogate how the assemblage territorializes the flows and relationships such that particular molar bodies and identities are invested with power and agency. We can also identify sites where transformations can and do take place, with what consequences.

So how might communication respond? Ironically, because communication has been so focused on the symbolic and the representational, it is particularly well situated to transform that focus into an appreciation of the collective assemblage of enunciation, but only if it is willing to let go of its loyalty to the duality of representation. There is no other discipline better situated to do so. However, I am not proposing that the object of analysis of communication should become the collective assemblage of enunciation. What I have argued for thus far makes clear why that would be unacceptable. To reiterate: enunciation can *only* be understood as a dimension of assemblage in articulation with the machinic.[9]

If we understand assemblage as the ontology for the philosophy and theory of communication, and the philosophical/theoretical trajectory undergirding inquiry, we are compelled as communication scholars to (1) theorize assemblage further, as the ontology of communication, (2) address old matters in new ways; for example, study media and culture without being mediacentric (see, e.g., Wise, 1997; Sterne, 2003; Grossberg, 2011, pp. 203–226), (3) expand the scope of communication studies to include the extremely important contemporary developments in technological, biotechnological, environmental, and bodily matters that, as addressed throughout my argument, characterize our changing cultural landscape (see, e.g., Sotirin, 2003),[10] and (4) attend to the consequences of territorialization and the possibilities for deterritorialization. As the concept of assemblage suggests, what we have to offer is the recognition of the co-constitutive work of the machinic and the enunciative, the consequences of territorialization, and the possibilities for escaping territories that rigidify, block and subdue. This is what communication could become. This is what, for an increasing number of scholars of communication, it already is.

Acknowledgment

I thank Patty Sotirin, Lawrence Grossberg, Gregory Seigworth, and Steve Wiley for their challenging critiques and generous suggestions as I developed this argument; Gordon Coonfield and the Department of Communication at Villanova University, where I first presented some of these ideas in 2008; and North Carolina State University, especially the Program in Communication, Rhetoric, and Digital Media, for the invitation to present an earlier version of this chapter as the Rolf Buchdal Memorial Lecture in 2009.

Notes

1 The seven lines are (1) combinations [of approaches], (2) comparative studies, (3) economic analysis, (4) socio-historical analysis, (5) popular culture, (6) mass communication, and (7) practical affairs (Berelson, 1959, p. 5–6).

2 I am supported in this suspicion by findings such as Ted Striphas's determination that "since their first appearance in the West more than 500 years ago printed books have been temporally unsettled, and unsettling" (2009, p. x).

3 See Jonathan Sterne's monumental study *The Audible Past* (2003), in which he demonstrates that modes has seriously misguided our understanding of the acoustic.

4 Armand Mattelart (1996) refers to the current state of communication studies as "mediacentric" (p. x). While his analysis of the allegiance to media differs somewhat from my own, he expresses a similar concern for the "incapacity" of the field to address the emergent and subtle articulations that ought to be the purview of communication.

5 Andy Clark's assertion of "embodied cognition" is merely one position among many in a highly contested arena. See Lawrence Shapiro (2011) for a review of these debates.

6 I do not mean to make light of these forces; they are considerable and worthy of carefully crafted analysis. How does the field of communication police its boundaries? My project here begins to address that from a largely theoretical perspective, but there is interesting work here for theorists of institutional and organizational communication. See the discussion of "territories" below.

7 For helpful discussions of assemblage in communication and cultural studies see Wise (1997, especially pp. 57–82; 2005). For a helpful discussion of the collective assemblage of enunciation see Lambert (2005, especially pp. 34–37).

8 I thank Charles J. Stivale for translating pertinent parts of L'Abécédaire from French.

9 Similarly, the importance of the collective assemblage of enunciation explains the uneasiness many of us have with the political economy of communication. From the perspective advanced here, much of political economy of communication is the political economy of communication institutions, not a communication analysis of the political economy of communication institutions, for it often neglects the problematic role of enunciation in the assemblage under consideration.

10 Patty Sotirin (2003) examines breast-feeding explicitly using a Deleuzian concept of communication. She argues that communication is an "assemblage machine" and argues effectively against the idea of communication as representational, artfully dissipating in the multiplicities of assemblages the "binarisms so integral to representation – signified/signifier, content/expression, text/context, consciousness/unconscious, encoding/decoding, subject/other, langue/parole" (ibid., p. 69). Her argument also takes up and addresses the sense in which Deleuze and Guattari express distaste for communication.

References

Berelson, Bernard. (1959). "The State of Communication Research." *Public Opinion Quarterly* 23:1, 1–17.

Bowen, Leslie M. (2005). "Reconfigure Bodies: The Problem of Ownership." *Communication Theory* 15:1, 23–38.

Carey, James W. (1989). "A Cultural Approach to Communication." Pp. 13–36 In *Communication as Culture: Essays on Media and Society*. Boston: Unwin Hyman. Originally published 1975.

Clark, Andy. (2003). *Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence*. New York: Oxford University Press.

Deleuze, Gilles. (1995). *Negotiations, 1972–1990*, translated by Martin Joughin. New York: Columbia University Press. Originally published 1990.

Deleuze, Gilles and Félix Guattari. (1987). *A Thousand Plateaus: Capitalism and Schizophrenia*, translated by Brian Massumi. Minneapolis, MN: University of Minnesota Press. Originally published 1980.

Deleuze, Gilles and Claire Parnet. (1996). L'Abécédaire de Gilles Deleuze, directed by Pierre-André Boutang. Video Editions Montparnasse.

Galloway, Alexander R. (2004). *Protocol: How Control Exists After Decentralization*. Cambridge, MA: MIT Press.

Grossberg, Lawrence. (2010). *Cultural Studies in the Future Tense*. Durham, NC: Duke University Press.

Haraway, Donna. (2003). *The Companion Species Manifesto: Dogs, People, and Significant Otherness*. Chicago, IL: Prickly Paradigm Press.

Havelock, Eric A. (1982). *The Literate Revolution in Greece and its Cultural Consequences*. Princeton, NJ: Princeton University Press.

Innis, Harold. (1972). *Empire and Communications*. Toronto: University of Toronto Press. Originally published 1950.

Innis, Harold Adams. (1951). *The Bias of Communication*. Toronto: University of Toronto Press.

Lambert, Gregg. (2005). "Expression." Pp. 31–41 In *Gilles Deleuze: Key Concepts*, edited by Charles J. Stivale. Chesham, UK: Acumen Publishing.

Lasswell, Harold. (1948). "The Structure and Function of Communication in Society." In *The Communication of Ideas*, edited by Lyman Bryson. New York: Harper and Row.

Lévy, Pierre. (1997). *Collective Intelligence: Mankind's Emerging World in Cyberspace*, translated by Robert Bononno. Cambridge, MA: Perseus Books.

Mattelart, Armand. (1996). *The Invention of Communication*. Minneapolis, MN: University of Minnesota Press.

McLuhan, Marshall and Quentin Fiore. (1967). *The Medium is the Massage: An Inventory of Effects*. New York: Bantam Books.

Ong, Walter. (1967). *The Presence of the Word: Some Prolegomena for Cultural and Religious History*. Minneapolis, MN: University of Minnesota Press.

Ong, Walter. (1982). *Orality and Literacy: The Technologizing of the Word*. New York: Methuen.

Rose, Nikolas. (2007). *The Politics of Life Itself: Biomedicine, Power, and Subjectivity in the Twenty-First Century*. Princeton, NJ: Princeton University Press.

Schramm, Wilbur. (1954). "How Communication Works." In *The Process and Effects of Mass Communication*, edited by Wilbur Schramm. Urbana, IL: University of Illinois Press.

Seigworth, Gregory. (January 25, 2011). *Personal communication*.

Shannon, Claude and Warren Weaver. (1949). *The Mathematical Theory of Communication*. Urbana, IL: University of Illinois Press.

Shapiro, Lawrence. (2011). *Embodied Cognition*. New York: Routledge.
Shepherd, Gregory J., Jeffrey St. John and Ted Striphas. (2006). *Communication as . . . Perspectives on Theory*. Thousand Oaks, CA: Sage.
Skloot, Rebecca. (2010). *The Immortal Life of Henrietta Lacks*. New York: Crown Publishers.
Sotirin, Patty. (2003). "Suckling Up to the BwO." Pp. 59–74 In *Animations [of Deleuze and Guattari]*, edited by Jennifer Daryl Slack. New York: Peter Lang.
Sterne, Jonathan. (2003). *The Audible Past: Cultural Origins of Sound Reproduction*. Durham, NC: Duke University Press.
Striphas, Ted. (2009). *The Late Age of Print: Everyday Book Culture From Consumerism to Control*. New York: Columbia University Press.
Thacker, Eugene. (2004a). *Biomedia*. Minneapolis, MN: University of Minnesota Press.
Thacker, Eugene. (2004b). "Foreword; Protocol Is as Protocol Does." Pp. xi–xxii In *Protocol: How Control Exists After Decentralization*, by Alexander R. Galloway. Cambridge, MA: MIT Press.
Thacker, Eugene. (2010). *After Life*. Chicago, IL: University of Chicago Press.
Weinberger, David. (2007). *Everything is Miscellaneous: The Power of the New Digital Disorder*. New York: Times Books.
Wise, J. Macgregor. (1997). *Exploring Technology and Social Space*. Thousand Oaks, CA: Sage.
Wise, J. Macgregor. (2005). "Assemblage." Pp. 77–87 In *Gilles Deleuze: Key Concepts*, edited by Charles J. Stivale. Chesham, UK: Acumen Publishing.

Chapter 10

Attention and assemblage in the clickable world

J. Macgregor Wise

We are enamored of our devices. Occasionally, we become afraid of them, in seemingly brief irrational moments of panic (sometimes justified, and sometimes not). And, from time to time, we become concerned with their impact on our lives, livelihoods, environment. In praise or blame, we single out particular devices: the iPod, the nuclear power plant, the spinning Jenny. But as the late philosopher Gilles Deleuze put it in one of his last interviews, the machines themselves tell us nothing (1995: 175). We have to realize that the machines are part of assemblages – multiple and diverse collections of objects, practices, and desires functioning across a broad landscape of devices.

We are at such a moment when our love or criticism of our devices needs to recognize that we are entering into a new assemblage. This assemblage has been identified most obviously with our portable devices for communication and computing (the iPod, the PDA, the BlackBerry, the cell phone), but including developments in ambient and ubiquitous computing as well [what Adam Greenfield (2006) has called "Everyware"]. Any assemblage we enter into puts us in a particular relation to the world – promises us particular powers, redefines who we think we are or could be. This new assemblage I have been calling the Clickable World because, I argue, that its defining characteristic is a particular relationship it places us in vis-à-vis the world. It presumes that the world is responsive and information-filled, clickable, like icons on the computer. It presumes or posits an agency on the part of humans that the world is, once again, a standing reserve, now of information, at our beck and call. Agency, however, is much more distributed and uneven in this assemblage. It resides not just in individual will, channeled through the devices which have become the remote controls of our everyday lives, but in the devices, networks, and spaces themselves. To call this an assemblage is to identify it as a dynamic, contingent, and expressive articulation of objects, affects, properties, and meanings (Deleuze and Guattari 1987; Wise 2005).

The concept of assemblage (*agencement*) is drawn from the materialist philosophy of Gilles Deleuze and Félix Guattari (1986, 1987).[1] As Pheng Cheah writes, "(f)or Deleuze, materiality is nothing other than the plane of

immanence" (2010: 86). Deleuze and Guattari describe the plane of immanence as follows:

> In any case, there is a pure plane of immanence, univocality, composition, upon which everything is given, upon which unformed elements and materials dance that are distinguished from one another only by their speed and that enter into this or that individuated assemblage depending on their connections, their relations of movement. A fixed plane of life upon which everything stirs, slows down or accelerates.
> (1987: 255; 1980: 312)

Deleuze and Guattari's work is an influential part of what Diana Coole and Samantha Frost have called the "New Materialisms" (2010), a growing body of scholarship marked by its "insistence on describing active processes of materialization of which embodied humans are an integral part, rather than the monotonous repetitions of dead matter from which human subjects are apart" (8). That is, "the human species is being relocated within a natural environment whose material forces themselves manifest certain agentic capacities" (10). Communication, in such a materialist framework, is more about resonance than representation, about forms and substances brought into relation. For example, Deleuze and Guattari talk of milieus, blocks of space time constituted by a repetition, a vibration. Milieus are not self-enclosed: "not only does the living thing continually pass from one milieu to another, but the milieus pass into one another; they are essentially communicating" (1987: 313; 1980: 384–385).[2] As a coming together of heterogeneous elements, assemblage is a rich concept for understanding communication from a materialist perspective.

An assemblage is always stratified (Deleuze and Guattari 1987; Wise 1997). On the one hand is a stratum they call the collective assemblage of enunciation, a semiotic system, characterized by incorporeal agency. Incorporeal agency is the ability to act at a distance, symbolically. A judge declares one guilty and one's status changes. Pressed up against this stratum is what they call the machinic assemblage, or technology, a plane of corporeal agency. To talk of an assemblage is always to consider both these strata.

But to speak of assemblage is also to recognize the dynamic nature of these stratifications and articulations. Assemblage is always in process. In English, the word, *assemblage*, provides the connotation of a static and achieved structure, which is how the term is used in art, archeology, and other disciplines. However, *agencement*, the original French term regards a process – it is the assembling, not the assemblage.

Let us take the example of a new portable video device, like the iPod Touch. On one hand, we have the usual elements: iPod, screen, software, hardware, earphones, and so on. But an iPod assemblage is more than just its physical components but includes aspects of the attached human: ear, eye, hand. Besides noting the elements, there are other dimensions to this

assemblage: its qualities, affects, and effectivity. So we can start talking about grasping, attending, lightness, being cool, shining, becoming private in public, and so on. We talk about what an assemblage does: how it shapes the space around it, transforms behavior, molds attention, distracts, focuses. The person attending to an iPod shapes their body in gesture and attitude, their perceptual field bends as if toward points of gravity; they have their own pattern of rest, speed, and slowness.

Assemblages create territories that shape space and express, but again these territories are always in process: deterritorializing and reterritorializing. We can enter assemblages locally: I pick up my mobile phone, sit down at my computer, scroll through my email on my iPod. My body changes speed and consistency. I enter into an assemblage of language that makes some statements possible and others not, and an assemblage of technology. Think of the act of picking up and holding a pen, versus holding a mobile phone to text or view the screen. A shift of the hand, twist of the wrist, reterritorializes the hand, reshapes it, embodying some aspects with intensity (the thumb). Each gesture brings us into relation with a stratification of discourse, expression, and with bodies and technologies.

Four key concepts characterize the assemblage of the clickable world: *reduction, disappearance, control*, and *attention*. I will touch on these briefly, but wish to focus on the dimension of attention in this essay. *Reduction* refers to the reduction of experience and the environment to information. I use this term as a way of considering how an assemblage of information helps shape everyday social space in the clickable world.

Speaking of ambient computing, Greenfield writes,

> In everyware, the garment, the room and the street become sites of processing and mediation. Household objects from shower stalls to coffee pots are reimagined as places where facts about the world can be gathered, considered, and acted upon. And all the familiar rituals of daily life … are remade as an intricate dance of information about ourselves, the state of the external world, and the options available to us at any given moment.
>
> (2006: 1)

Augmented reality systems seek to overlay the world with information attached to people, places, and objects. Though the goal is to add to experience, the danger is that the information itself stands in for the object (just as data selves take priority over physical selves; see Lyon 2007). In addition, these devices are seen as helping manage information overload, selecting and reducing experience to target our attention on salient features.

Disappearance refers to the tendency of these technologies to disappear either literally, into the surrounding environment, or phenomenologically, by falling into habit. As ubiquitous computing pioneer Mark Weiser put it, "the most profound technologies are those that disappear" (1991: 94).

Their disappearance from conscious thought means that they are no longer regarded critically (Schaefer and Durham 2007). Technological disappearance is not a new feature of this assemblage. As tool-use falls into habit, as they become what Heidegger called "transparent equipment" (cited in Clark 2008), they fall from our attention. What's new here is the scale of the disappearance, and the power the attenuating technologies potentially have over our lives.

Control is the third dimension, referring to the integration of these systems into systems of surveillance and governmentality. As Deleuze argues, "[w]e're moving toward control societies that no longer operate by confining people but through continuous control and instant communication" (1995: 174). Control is about the constant subtle structuring of social life, the ways that we are sorted, tracked, cajoled, and tempted. We are not told to stand still and shut up, but to be mobile and to communicate. We are forced to speak and to move through our days faster and faster.

The element of the assemblage that I will pursue in this chapter is *attention*. Note that attention has been a feature of many of the other elements as well. Consider the ethic of mobile communication that Katz and Aakhus (2002) termed *perpetual contact*. The ethic of having a mobile phone is to be not only available to be called, but also to actually maintain a near constant co-presence with select others through voice and text, which places us experientially in multiple locations at once. Iconoclastic French urbanist and cultural theorist Paul Virilio refers to such devices as "simulators of proximity" (2002: 41). These include text messaging, IM'ing, social network status updates on MySpace or Facebook, Twitter, and other services. While we can certainly see constant contact as a dimension of control, these practices of constant co-presence are part of a transformation of our attentive behavior. As art historian Jonathan Crary has argued, attention is "deeply historical" (1999). The ways we pay attention, the ways we attend and disengage from particular objects or visual or experiential fields, is the product of a historical moment. Transformations in attentive behavior usually accompany transformations of subjectification and power more generally. Practices of constant contact accompany a constant low-level attention throughout everyday life (Crary 1999). Simulators of proximity provide an ever-present potential for communication.

Attention becomes a key feature of the discourse regarding this new assemblage in two ways. The first is in terms of *distraction*, and the second is in terms of the formation of an *attention economy*. Let me address these briefly before proposing a different model to understand the working of attention within the clickable world.

Distraction

Distraction has become a common element in recent popular discourses about new media. A state of distraction is a state of scattered, shattered

attention. Something poses a distraction if it acts as a gravitational point, tugging our attention here or there. In the clickable world, we are surrounded by such competing gravitational points, and flit from one to the next.

Linda Stone (2009) describes what she calls continuous partial attention, which she says is "motivated by a desire to be a LIVE node on the network," to continuously pay partial attention to one's peers as well as the broader mediascape. In addition to constant contact, continuous partial attention also exhibits the ethic of information seeking. Stone writes, "we pay continuous partial attention in an effort NOT TO MISS ANYTHING. It is an always-on, anywhere, anytime, any place behavior that involves an artificial sense of constant crisis" (2009).

Speaking recently at the graduation ceremonies at Hampton University, President Barack Obama said,

> And with iPods and iPads, and Xboxes and PlayStations – none of which I know how to work – information becomes a distraction, a diversion, a form of entertainment, rather than a tool of empowerment, rather than the means of emancipation. So all of this is not only putting pressure on you; it's putting new pressure on our country and on our democracy.
>
> (2010)

This crisis of distraction has been the subject of a number of recent popular accounts over the past few years (Gallagher 2009; Jackson 2008). The argument goes that the particular formation of this distraction – around technologies of socialization, entertainment, and self-obsession – is part of what is contributing to the downfall of youth (see also Bauerlein 2008) – not to mention the crisis of democracy noted by the President. Without sustained attention, they argue, even in a sea of information unprecedented in human history, we lack the capacities to think deeply and creatively (Jackson 2008).

N. Katherine Hayles contrasts hyper attention with deep attention. She writes that "Hyper attention is characterized by switching focus rapidly among different tasks, preferring multiple information streams, seeking a high level of stimulation, and having a low tolerance for boredom" (which is akin to Stone's continuous partial attention) while deep attention "is characterized by concentrating on a single object for long periods …, ignoring outside stimuli while so engaged, preferring a single information stream, and having a high tolerance for long focus times" (2007: 187; see also Hayles 2008). While deep attention has been culturally valued, especially in higher education, it is specific to certain developed societies that can provide the luxury of time and specialization. She argues that hyper attention came first (as a primitive survival mechanism), but is now increasing in a hypermediated age: "there is little doubt that hyper attention is on the rise and

that it correlates with an increasing exposure to and desire for stimulation in general and stimulation by media in particular" (2007: 191).

Now, distraction is not a new phenomenon by any means – perhaps what makes it new is the seeming ubiquity of technologies of distraction. In any case, distraction has been seen as being an important feature of both modernity and postmodernity. However, while Walter Benjamin felt that distraction "held forth the possibility of new modes of perception" (Crary 1999: 50; see also Highmore 2010), and, indeed, had revolutionary potential, Jackson fears that we cannot be creative in that milieu – we need sustained attention for creativity. But as Jonathan Crary points out, the idea of sustained creative attention is a product of the same formation which is producing the means of distraction.

Attention economy

The economic costs of such distraction have begun to be totaled up. An article in the *Guardian* newspaper cites, "a study commissioned by Hewlett-Packard report[ing] that the IQ scores of knowledge workers distracted by email and phone calls fell from their normal level by an average of 10 points – twice the decline recorded for those smoking marijuana" (Hemp 2009). Another study cited in the same article showed that workers were interrupted or switched tasks every 3 minutes, and it took workers an average of 24 minutes to return to the first interrupted task. And Intel calculates that these interruptions cost it nearly a billion dollars a year.

But, on the other hand, in an age of distraction just described, gaining attention, laying claim to a piece of our attention, becomes more valuable. The economics of the new assemblage is the economics of attention. A handful of writers have sketched out some dimensions of this new economy over the past decade (Goldhaber 1997; Franck 1999; Beller 2006; Lanham 2006).

All of these attempts to theorize attention respond to the growing prominence of celebrity and micro-celebrity especially online and the radically new levels of competition for our attention not only between proliferating media (TV, internet, films, and cell phone) but within media themselves (hundreds of cable channels, thousands of iPhone apps, etc.). These theories are also responding to the way our attention has been capitalized, the intensification of marketing and monitoring practices going back a century which Mark Andrejevic (2007) has termed the work of being watched.

Rethinking attention

If we really want to explore assemblages of attention, these accounts are missing something. What I want to hone in on is their assumptions of what attention is in the first place and then propose, as a thought piece, something else.

First, in these accounts, attention gets reduced to being simply about perception. Indeed, for most, attention defaults to visual attention. For Jonathan Beller the attention economy and the visual economy become synonymous. But we can attend to things (meaning orient towards, focus on, note) that are not only not visual but also not perceptually based (like a train of thought). As Crary points out, this emphasis of the visual is not unique by any means. There is a long history of the dominance of the visual in terms of the understanding of attention even in psychology (see, e.g., Pashler 1998; Raz and Buhle 2006).

Second, the argument that attention is a limited resource presumes a particular model of attention based on an information processing model of the brain. In this model, the brain acts like a computer.[3] Multiple inputs compete for dominance in the central processor (executive attention) which can only select one at a time. This model of attention – as perceptual and based on an information processing model of the brain – is one where attention is a locatable property of the brain. This is a quite common model and indeed is the dominant way attention is studied by mainstream psychology, at least in the United States.

But some radical philosophers of cognition (Andy Clark, Daniel Dennett, George Lakoff, Alva Noë, and others) have challenged this model of cognition. What they challenge are the notions that our brains are like computers and that our minds are merely properties of our brains responding to stimuli from outside. They challenge as well what others might call the folk psychology model of attention (Pashler 1998): executive attention sits like a homunculus in our heads, juggling competing stimuli, tugged by a growing number of forces in many directions. Current models of attention in cognitive psychology and neuroscience are actually more complex, of course. One popular model by Michael Posner posits three different networks of attention (alerting, orienting, and executive) with different neurological sites of activity and an unclear degree of relation and autonomy (see Posner 2004; Raz and Buhle 2006). But this model still contends that attention is primarily an operation of/in the brain.

What I want to do in this section is to follow this branch of the philosophy of cognition and see how attention comes along, recognizing that attention and cognition are different, yet deeply entangled, phenomena. I recognize that this way of approaching cognition is not without controversy (indeed, there are numerous responses to Clark, Dennett, *et al.*; see, e.g., Adams and Aizawa 2008), but I think that it is a generative way of thinking about the relation of the subject to the environment, not as an autonomous subject embedded in an environment but the co-construction of subject and environment. And it is a generative way of thinking about attention as plural (attentions) and distributed across brain, body, and environment.

Andy Clark (2003) argues that cognition is distributed. It does not occur just in our heads but happens in conjunction with our activities and our technologies (which he refers to as our scaffolding). Following Daniel

Dennett, he critiques the notion of a central self ["a small-but-potent internal *user* relative to whom all the rest – be it neural, bodily, or technological – is merely a toolkit" (2003: 138)]. Rather than thinking of the self as self (brain) and supplementarily body and technology, we should think of the self as "a rough-and-tumble, control-sharing coalition of processes – some neural, some bodily, some technological" (138). Cognition is distributed across "a hybrid, extended architecture." Explaining an example he gives about working on a presentation in one's office, he writes,

> In each case, the real problem-solving engine was the larger, biotechnological matrix comprising (in the case at hand) the brain, the stacked papers, the previous marginalia, the electronic files, the operations of search provided by the Mac software, and so on, and so on. What the human brain is best at is learning to be a team player in a problem-solving field populated by an incredible variety of nonbiological props, scaffoldings, instruments, and resources.
>
> (2003: 26)

We are, he states, natural-born cyborgs always seeking to dovetail our thinking with extrasomatic trinkets and processes. While there are occasions where our augmentations are more permanent, "in most other cases, we confront only soft-assembled, temporary medleys of information-processing resources comprising a dovetailed subset of neural activity and bodily and environmental augmentations" (2008: 116). The problem with Clark is that he does not take seriously enough his idea that ourselves are these coalitions of processes; he too easily falls back into the formula of mind plus. And in this Clark is in line with others who study distributed cognition, that human cognition ends at the skin or sensory contact and cannot extend into the world (the world is only how it is sensed) (see Dror and Harnad 2008). As Alva Noë argues, for Clark, "[c]onscious experience would seem to be detachable from and independent of the world without" (2009: 196). Noë argues that, rather than consciousness being the articulation of these elements, consciousness is the *expression* of these articulations, it emerges with the assemblages of cognition Clark is exploring. Noë puts it succinctly: "Consciousness is not something that happens inside us. It is something we do or make. Better: it is something we achieve. Consciousness is more like dancing than it is like digestion" (xii).

Consciousness emerges alongside of the brain, body, and environment. "Meaningful thought arises only for the whole animal dynamically engaged with its environment" (8). Thought does not occur on its own, as if the brain were functioning in a vat like in some old horror film. This does not mean that thought occurs *without* the brain. "[T]he brain's job is that of facilitating a dynamic pattern of interaction among brain, body, and world" (47).[4]

Neither Clark nor Noë explicitly address the question of attention. Clark mentions attention, but takes it for granted. But let me explore a bit by

means of implication. Attention is generally considered purely cognitive. It is the choosing of the homunculus – which cognitive module is activated, which stimuli is addressed. Attention is not only directed and intentional but also driven by habits of cognition, the nature and intensity of stimuli, and so on. Alternatively, attention is the result of neural processes of alerting or orienting or resolving "conflict between computations in different neural areas" (Raz and Buhle 2006: 374). Or attention is the three different networks described by Posner (alerting, orienting, and executive). However, we attend to much more – what we could call subattentional processes (Dror calls these "vegetative"). Some of these processes are part of what psychologists call *attenuation* – things we have paid attention to so many times that they become habit – we do not pay attention to the way we pay attention (e.g., writing) (Pashler 1998). Included in attenuation are those stimuli noted, but not recognized by executive attention.

What I want to propose here, as a speculative and hopefully generative model to begin to think through how attention works in this new assemblage, is to think all these types of attention on a continuum – from nerves attending to the environment or to physiological processes such as acid levels in the stomach; to proprioception; to posterior parietal subsystems which allow us to move and act without attending and controlling each motion (the hand attends to the cup, even though I am attending to a volume on cognitive science). What if, to parallel the preceding discussion of cognition, executive attention is what is *emergent* alongside these processes, expressed and produced with these processes? Jackson, echoing Posner, writes that "[a]ttention is an organ system, akin to our respiratory or circulation systems" (2009: 14). But if, for Noë, cognition is more like dancing than digestion, perhaps attention is more ballet than breathing. Attention is then not a site and function, locatable and isolatable. It is not an organ system, dedicated to a particular function. It is the expression of all of these different systems. And cognitive and corporeal attention are not the only forms of attention germane to the assemblage. Attention is distributed and such distributed attention extends beyond what Andy Clark likes to refer to as the "good old biological skin-bag." We are distributions and dovetailings not just of cognition, but attention. We delegate agents to pay attention for us (to use actor-network theory language), or to filter or enhance our attention.

New assemblages of distributed attention

If we take Clark's image of our cognitive scaffolding – thinking as a process that brings in brain, physical gesture (counting on fingers), and external components (sticky note reminders, laptop computers) – we see clearly the parallels and implications of projects of distributed computing. Distributed computing, also called ubiquitous computing (ubicomp), or sometimes ambient computing, is about the dispersal of computing function across our

everyday environment. Our scaffolding, meaning our expanding means of cognition and sense of self, proliferates.

But more than just a model of distributed information processing (which limits cognition once again to a computing model), these developments include a proliferation of attentional and subattentional processes, some of which loop back through our individual brains, but others play out across the environment. Attention in the new assemblage cannot just be about distracted youth and their mobile devices; that is, it cannot just be about the particular configurations of our individual cognition (e.g., deep or hyper attention), but about attentional processes scattered across our devices. Perhaps this is what's new here – this contemporary assemblage (beyond brain, skin, and human), more than others, is one that *attends*.

Mark Weiser calls it *awareness*, one of the founding principles of ubiquitous computing – at least one of the principles one can distill from his generative account, "The Computer for the 21st Century" (1991). Ubiquitous computing is not just the integration of computing potential into everyday objects, but those objects' awareness of their location, the context of their use, the identities and preferences of the users nearby, and other situational factors. These do not have to be spectacularly intelligent machines to accomplish this, they must simply pay attention. For example, collaborative ubicomp systems allow one to attend to the work of one's scattered colleagues and collaborators by tracking their activities (such as what document they have up). Paul Dourish calls these "awareness technologies" (2001: 174).

For Weiser, the computers become attentive of and for us, and for the people involved the best computer is one that does not dominate our attention; a computer that is invisible so that we only attend to the task and not the machine. Steve Mann, an iconoclastic computer engineer, performance artist, and pioneer of wearable computing, rejects the goals of ubicomp, arguing that they are simply the extension of surveillance schemes which empower structures over individuals (Mann with Niedzviecki 2001). Mann's project is to create individually tailored and controlled wearable computing systems that will allow individuals to wrest back control of their environment and attention. Mann's systems allow him to filter what he sees through his computer, manipulating the images and projecting them back on his eye, so that, for example, he can program it to erase all billboards from his sight.

Mann's wearables were just an early precursor of developing projects of lifelogging – those utilizing wearable technologies to capture the experiences of their day so that this data can become a memory aide or can be mined for self-knowledge (see, as a recent example, Bell and Gemmell 2009). Basically these are schemes to have technologies pay attention to everything we see, hear, say, encounter, and so on, creating a quite intimate surveillant assemblage. The idea of a surveillant assemblage was one mapped out years ago by Kevin Haggerty and Richard Ericson (2000), who describe how differing surveillance systems are becoming integrated and how different aspects of

the body (DNA, facial configuration, etc.) are taken up by these different systems in varying ways.[5]

A focus on assemblages of attention means that we need to draw the line, make the connections, between devices which pay attention to us (the surveillant assemblage), devices which seek to manage our attention (to both attract/distract us and also track our attention so as to better attract/distract), and our own cognitive and habitual attentional processes. That is, to speak of attention today is to speak of the contingent aggregation, articulation, and expression of all of these processes.

Even without the development of full-fledged ubicomp (the *Minority Report* scenario), we do see shifts in our attentional assemblage. Writing a decade ago, Jonathan Crary notes that

> [t]elevision and the personal computer, even as they are now converging toward a single machinic functioning, are antinomadic procedures that fix and *striate*. They are methods for the management of attention that use partitioning and sedentarization, rendering bodies controllable and useful simultaneously, even as they simulate the illusion of choices and "interactivity."
>
> (1999: 75)

And we could add, even as they become mobile, they still fix and striate. Crary talks of our loss of reverie, of daydreaming:[6]

> Though its history will never be formally written, the daydream is nonetheless a domain of resistance internal to any system of routinization or coercion … But what once might have been called reverie now most often takes place aligned with preset rhythms, images, speeds, and circuits that reinforce the irrelevance and dereliction of whatever is not compatible with their formats.
>
> (77–78)

Deleuze once referred to such moments as "vacuoles of noncommunication, circuit breakers, so we can elude control" (1995: 175).

Conclusion

If we think of these new assemblages as assemblages of attention, we see the distribution and formation of attention across body, brain, tool, and environment. We have a plane of attention, with gravitational points of intensity and valuation, that is a product of power, experience, habit, chance, and desire. It is a plane of attention not centered around just the perceptual field of an individual, but in devices scattered across our bodies and environments which note, recognize, and attend. What we experience

as attention – executive attention – is an expression accompanying some of these processes, but it is only a part of a broader assemblage. Attention is cognitive, habitual, and machinic, undergirded by affect which can never be fully channeled.

Pressed up against the strata of attention is not a plane of distraction, but that of inattention. Inattention is not simply the absence of attention but has its own gravitational points. For example, Jonathan Beller (2006) in his work on the economics of attention laments the invisibility of the Third World from much of our attention in the West. And I think of Steve Mann's wearable computers, filtering his environment and structuring his attention and inattention.

If we return to the idea of the stratification of the assemblage, on the one hand we have the linguistic dimension of the assemblage: the communicative capacities of attention. And there are two types of communication germane here, communication-with and communication-about. There are multiple elements of communication-with in the assemblage: objects provide the user with information or utilize signs to catch our attention, devices enable and encourage perpetual communication with a network of friends and acquaintances, and numerous elements of the assemblage are in active communication with each other, often behind our backs: mobile phones communicate with cell towers whether or not we are actively calling, wifi devices connect with local nodes, bluetooth devices seek out other bluetooth devices, and so on. There are also multiple elements of communication-about: the gathering of information about you, your communications, and your connections. This is the burgeoning surveillant assemblage. In the linguistic strata of the new assemblage we find types of language particular to the assemblage, types of information available, codes of texting and programming, and so on. On the other hand, we have the strata of technology: the collection of devices and networks surrounding us, and our own habits embedded in flesh and machine.

Whereas this description of the assemblage of attention seems all pervasive and encompassing, it is always in process, incomplete. There are always opportunities for noncommunication and reverie.

Notes

1 On the idea of Assemblage, see Deleuze and Guattari's chapter, "What is an Assemblage?" in *Kafka: Towards a Minor Literature* (1986) and the sections on Assemblage and Abstract Machines in their "Conclusion: Concrete Rules and Abstract Machines" in *A Thousand Plateaus* (1987: 503–504, 510–514 respectively; 1980: 629–630, 636–641). Assemblage is also dealt with in their chapters "1730: Becoming-Intense, Becoming-Animal, Becoming-Imperceptible . . . " (see esp. 1987: 257–260; 1980: 314–318) and "1837: Of the Refrain" and at a number of other points throughout the book.

2 On Deleuze and communication, see *The Logic of Sense* (1990) on the incompossible as communication (pp. 171–174) and *Difference and Repetition* (1994) on communication as the resonance of divergent series (pp. 117–119 and 145–146).

3 For overviews of the information processing model of the brain, see Pashler (1998) and Shapiro (2011).
4 Shapiro (2011) sets out and contrasts Clark and Noë's positions, as well as those of others in the field of embodied cognition. Shapiro argues that while Noë is challenging standard cognitive science, Clark is extending it.
5 See also William Bogard's (2006) extension of Haggerty and Ericson's (2000) thesis on the surveillant assemblage.
6 Recent research in neuroscience shows that when we lack such downtime (such as reverie or daydreaming), when we fill our moments of boredom by playing on our mobile media devices, we inhibit our ability to learn (Richtel 2010).

References

Adams, A. and Aizawa, K. (2008) *The Bounds of Cognition*, Malden, MA: Blackwell.
Andrejevic, M. (2007) *iSpy: Surveillance and Power in the Interactive Era*, Lawrence, KS: University Press of Kansas.
Bauerlein, M. (2008) *The Dumbest Generation: How the Digital Age Stupefies Young Americans and Jeopardizes Our Future*, New York: Penguin [Kindle Edition].
Bell, G. and Gemmell, J. (2009) *Total Recall: How the E-Memory Revolution Will Change Everything*, New York: Dutton.
Beller, J. (2006) *The Cinematic Mode of Production*, Hanover, NH: Dartmouth University Press.
Bogard, W. (2006) "Surveillance Assemblages and Lines of Flight," in D. Lyon (ed.) *Theorizing Surveillance: The Panopticon and Beyond*, Portland, OR: Willan Publishing.
Cheah, P. (2010) "Non-Dialectical Materialism," in D. Coole & S. Frost (eds.) *New Materialisms: Ontology, Agency, and Politics*, Durham, NC: Duke University Press.
Clark, A. (2003) *Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence*, New York: Oxford University Press.
Clark, A. (2008) *Supersizing the Mind: Embodiment, Action, and Cognitive Extension*, New York: Oxford University Press.
Coole, D. and Frost, S. (2010) "Introducing the New Materialisms," in D. Coole & S. Frost (eds.) *New Materialisms: Ontology, Agency, and Politics*, Durham, NC: Duke University Press.
Crary, J. (1999) *Suspensions of Perception: Attention, Spectacle, and Modern Culture*, Cambridge, MA: MIT Press.
Deleuze, G. (1990) *The Logic of Sense*, trans. M. Lester with C. Stivale; C.V. Boundas (ed.), New York: Columbia University Press.
Deleuze, G. (1994) *Difference and Repetition*, trans. P. Patton, New York: Columbia University Press.
Deleuze, G. (1995) *Negotiations*, trans. M. Joughin, New York: Columbia University Press.
Deleuze, G. and Guattari, F. (1980) *Mille Plateaux: Capitalisme et Schizophrénie*, Paris: Les Éditions de Minuit.
Deleuze, G. and Guattari, F. (1986) *Kafka: Toward a Minor Literature*, trans. D. Polan, Minneapolis, MN: University of Minnesota Press.
Deleuze, G. and Guattari, F. (1987) *A Thousand Plateaus*, trans. B. Massumi, Minneapolis, MN: University of Minnesota Press.
Dourish, P. (2001) *Where the Action is: The Foundations of Embodied Interaction*, Cambridge, MA: MIT Press.

Dror, I.E. and Harnad, S. (2008) *Cognition Distributed: How Cognitive Technology Extends Our Minds*, Philadelphia, PA: John Benjamin Publishing.
Franck, G. (1999) "The Economy of Attention," *Telepolis*. Available HTTP http://www.heise.de/tp/r4/artikel/5/5567/1.html (accessed 8/12/2009).
Gallagher, W. (2009) *Rapt: Attention and the Focused Life*, New York: Penguin.
Goldhaber, M. (1997, December) "Attention Shoppers!" *WIRED*, 182–190.
Greenfield, A. (2006) *Everyware: The Dawning Age of Ubiquitous Computing*, Berkeley, CA: New Rider.
Haggerty, K. and Ericson, R. (2000) "The Surveillant Assemblage," *British Journal of Sociology*, 51(4): 605–622.
Hayles, N.K. (2007) "Hyper and Deep Attention: The Generational Divide in Cognitive Modes," *Profession*: 187–199.
Hayles, N.K. (2008) *Electronic Literature: New Horizons for Literacy*, Notre Dame, IN: University of Notre Dame Press.
Hemp, P. (2009, 24 Sept.) "Information Overload," *The Guardian Online*. Available HTTP http://www.guardian.co.uk/technology/2009/sep/24/information-overload-email-blackberry (accessed 9/24/2009).
Highmore, B. (2010) *Ordinary Lives: Studies of the Everyday*, London: Routledge.
Jackson, M. (2008) *Distracted: The Erosion of Attention and the Coming Dark Age*, Amherst, NY: Prometheus Books.
Katz, J. and Aakhus, M. (2002) *Perpetual Contact: Mobile Communication, Private Talk, Public Performance*, New York: Cambridge University Press.
Lanham, R. (2006) *The Economics of Attention: Style and Substance in the Age of Information*, Chicago, IL: University of Chicago Press.
Lyon, David. (2007) *Surveillance Studies: An Overview*, New York: Polity Press.
Mann, S. With Niedzviecki, H. (2001) *Cyborg: Digital Destiny and Human Possibility in the Age of the Wearable Computer*, Toronto: Anchor Canada.
Noë, A. (2009) *Out of Our Heads*, New York: Hill & Wang.
Obama, B.H. (2010) "Remarks by the President at Hampton University Commencement, 9 May." Available HTTP http://www.whitehouse.gov/the-press-office/remarks-president-hampton-university-commencement (accessed 5/24/2010).
Pashler, H.E. (1998) *The Psychology of Attention*, Cambridge, MA: MIT Press.
Posner, M. (Ed.) (2004) *Cognitive Neuroscience of Attention*, New York: Guilford.
Raz, A. and Buhle, J. (2006) "Typologies of Attentional Networks," *Nature Reviews: Neuroscience*, 7: 367–379.
Richtel, Matt. (2010) "Digital Devices Deprive Brain of Needed Downtime," *The New York Times*, 24 August. Online (accessed 1/7/2011).
Schaefer, P.D. and Durham, M.G. (2007) "On the Social Implications of Invisibility: The iMac G5 and the Effacement of the Technological Object," *Critical Studies in Media Communication*, 24(1): 39–56.
Shapiro, L. (2011) *Embodied Cognition*, New York: Routledge.
Stone, L. (2009) "Continuous Partial Attention." Available HTTP http://www.lindastone.net/qa (accessed 7/8/2009).
Virilio, P. (2002) *Ground Zero*, trans. C. Turner, New York: Verso.
Weiser, M. (1991) "The Computer for the 21st Century," *Scientific American*, 265(3): 94–104.
Wise, J.M. (1997) *Exploring Technology and Social Space*, Thousand Oaks, CA: Sage.
Wise, J.M. (2005) "Assemblage," in C. Stivale (ed.) *Gilles Deleuze: Key Concepts*, Chesham: Acumen.

Chapter 11

The documentality of Mme Briet's antelope

Bernd Frohmann

This chapter proposes a concept of *documentality* as a contribution to an emerging field of study about documents, what they are and what they do, and about the processes or events of documentation, how they function, and how they happen.[1] By resisting reductions of documents to vehicles transporting consciousness, intentional substance, or human speech from person to person, it helps materialize documentation.[2] It is developed here, not through familiar kinds of documents, but through Suzanne Briet's idea of an antelope as a document.

The chapter builds upon the author's previous work exploring how thinking about documentation in terms of "arrangements" directs attention to documentary agency.[3] The primary characteristics of the concept of documentality are presented and the concept is situated in a conceptual and ethical space.

The antelope, documentality and documentary agency

Briet was a librarian at the Bibliothèque Nationale in Paris from 1934 to 1954, and an important figure in documentation and information studies, renowned for claiming in 1951 that a thing can be a document (Briet 2006). Her famous example was the antelope. She said it must be in a zoo, where it can function much like traditional documents because there it is in a space where it can easily be presented as evidence for knowledge claims. But her connection between documentation and evidence can be generalized to include a wide range of actual and possible nonevidentiary and nonscientific arrangements, such as artistic, creative, and imaginative ones, in which a thing's documentary powers are exercised. The deeper point about Briet's antelope is that something becomes a document by virtue of its arrangements with other things, not about a privileged form of those arrangements, such as their evidentiary functions.[4] I take from Briet the idea that in complex arrangements *things* exercise documentary agency, which is capable of being detected, understood, and engaged in many different ways, and by many different kinds of actors, both human, and nonhuman. The problem is to show how a thing's documentary agency, power or force – which I call its documentality – is exercised by virtue of those arrangements. By keeping the material thing at the center of our concern, the concept of documentality follows what I take to be the most important aspect of Briet's idea of an

antelope as a document. I am interested in *traces* as happenings, in how something gets written, or, in the widest sense, *inscribed*. My questions are, how does this "happening," this *event*, occur? How do writing, traces, and documentation emerge from the interactions between a *thing* – this antelope – and other elements of its specific arrangements?

The concept of documentality is meant to contribute to thinking about documentation in its richness and complexity. It has four important features. First, documentality is a function that exhibits varying degrees of intensity in its modes of operation. Think, for example, of the frenzy of the disciplinary documentary apparatuses of apartheid South Africa or of the German Democratic Republic's Stasi, where the collection, organization, and deciphering of the traces of obsessively defined categories of persons extended into the capillaries of everyday life – a documentary intensity whose modern manifestations extend at least as far back as the eighteenth-century physiognomic theories of Johann Casper Lavater (see Gray 2004; Ferenbok 2009), but whose origins, according to Valentin Groebner, were "thoroughly medieval" (2007, 8).[5] The documentary apparatuses of less repressive régimes function in less intense, more moderate and indirect ways, and act at greater distances and less selectively.

Second, documentality is historically contingent, permitting spatial and temporal comparisons of the breadth, and extent of its exercise by various kinds of things: events, ideas, laws, works of art, animals, gardens, rocks, and gods. The actualization of the documentality of a particular thing varies across time and space as arrangements between it and other elements vary; specific modes of operation of documentality are therefore local and historical (for specific historical examples, see Chapter 6 of Frohmann 2004a, 2004b).

Third, documentality exhibits different levels of complexity. To understand its modes of operation one needs to follow complex arrangements between heterogeneous elements to discover how, at this time and place, in arrangements with which technologies, persons, groups, institutions, and conceptual elements a specific mode of documentality actually functions, with what intensity, and to what effect.

Finally, I intend documentality to denote a *property* of a specific thing or phenomenon: its power or force. This fourth aspect of documentality refers to a thing's *agency*, which is exercised in its arrangements with other things. I propose these four aspects – functionality, historicity, complexity, and agency – as the principal characteristics of the concept of documentality.

Agency is perhaps the least intuitive of the concept's features, and the one most likely to attract resistance, because we are not used to thinking about documents as agents (see also Frohmann 2007a). Following the path of Briet's antelope, we travel to three selected sites along the way, to motivate the concept of documentary agency.

First site: primary and secondary qualities

Our first pause is at a specific philosophical place that helps us think about documentality as a property of a thing. The bifurcation of the properties of

things into primary and secondary qualities traces a line of Western philosophy beginning with Democritus, through Descartes, Galileo and Newton, to its fullest development by Locke (and to its explicit rejection by Berkeley and Reid). Primary qualities belong to objects, whereas secondary qualities arise from the effects of objects on conscious human subjects. The two kinds of qualities are incommensurate. The former are the mathematical, measurable, and geometric properties of *objects themselves*. The latter are sensory properties, such as colors, odors, textures, and sounds. But only primary qualities express the objective reality of things; the sensory qualities through which we think we know them are merely effects on our sensory apparatus, manifested as subjective, mental representations.

Translating this bifurcation into documentary terms, we see that according to it what is important is not the *thing*, but the mental representations we gain from it and then transfer to some tangible medium. That is an old story, one to which we have long been accustomed. But Latour, following Alfred North Whitehead channeled by Isabelle Stengers, challenges this bifurcation to insist on the futility of a separation between representing subjects and a mute and meaningless nature. Latour quotes Whitehead – "the red glow of the sunset should be as much part of nature as are the molecules and electric waves by which men of science would explain the phenomenon" (Whitehead 1920, 28–29, quoted in Latour 2004, 244) – and he adds his own example: "we are asked to consider that the nightingale sings only in our mind (or our brain) and not in the world out there because hearing a song is not part of the list of primary qualities" (Latour 2008, 38). If the antelope is as rich in properties as the nightingale's song or the sunset's red glow, this first pause on our path introduces us to philosophical allies who can help develop a concept of documentality that designates documentary agency as a real property of things themselves. The thing's documentality is a property or attribute because it refers to the power or agency of the thing exercised in the varying intensities of its capacity to produce, afford,[6] allow, encourage, permit, influence, render possible, block, or forbid the generation of marks, traces or inscriptions in its arrangements with other things. Briet's insistence on the antelope as the initial, primary document and on the cascade of documents generated by humans who study the caged antelope as "secondary or derived" (Briet 2006, 10–11) can be read as foreshadowing such a concept of documentality.

Second site: of birds and bees

An implication of documentality's being a property of a thing is that documentary agency does not require human subjects. Atoms interacting with radiation leave signatures, but the signature, mark, trace, or inscription of the atom's individuality, singularity, and identity has nothing to do with human beings. The traces generated by territorial animals – by dogs, with urine, by wolves, with feces – mark their territory as clearly for other animals as No Trespassing signs mark a human's private property. The plumage of birds and changes in colors of fishes manifest the documentality of these creatures.[7]

A specific form of the expressive powers of things to leave unique traces is noted in a news report on olfactory surveillance, which describes efforts of the German police to collect and archive human scents from political activists, a Chinese "scent bank" of odors collected from criminal suspects and crime scenes, the South African police's overtures to a UK electronic nose company (apparently there are many such) to share its "odor signature" of black people, UK research into enrolling swarms of trained bees as allies in scent detection, and in the United States, not only bees, but moths and cockroaches as well (Marks 2008). Unique olfactory expressions of an individual human body manifest the body's documentality in arrangements with the scent detection capacities of trained dogs, bees, moths, cockroaches, and the German police.

To say that documentality does not require human agency is not to deny that sometimes only an acute tuning of human consciousness can detect the world's documentary agency. In *Shoah*, Claude Lanzmann's monumental 9-h film on the holocaust, Jan Piwonski of Sobibór (the site of a Polish Nazi extermination camp), vividly recalls a peculiar *silence*. He reports that while the camp was constructed with slave labor, there were many sounds: commands, screams, and shots. But shortly after the first arrival of victims who packed the over 40 rail freight cars there descended upon the town a remarkable silence, one he called "an ideal silence." Asked to describe it, he replied it was the sound of *nothing*; one *heard* nothing. This silence is an exercise of the documentary agency of an event: the extermination of more than 200,000 prisoners of the Sobibór camp. This "ideal silence" is an inscription of that event. It is a silence like no other, not, for example, the serene silence hikers experience in desolate terrain or at the mountain's summit. To locate the documentary power of this silence in Piwonski's mind erases the acute tuning of his consciousness to a material phenomenon: the causal relation between what happened in the camp and that remarkable silence. The documentality of extermination on the day Piwonski was attuned to discern it is manifested in the generation of a *trace* – that silence – which has a real, causal connection to a specific action: extermination. In the terms of Charles Sanders Peirce's semiology, the silence is an *index* of extermination. The symbol is related to its object by convention, the icon by resemblance, but of the index, Pierce says: "An *Index* is a sign which refers to the Object that it denotes by virtue of being really affected by that Object" (Peirce 1960, 2:248). In another text, he expands:

> if the sign were not related to its object except by the mind thinking of them separately, it would not fulfil the function of a sign at all. Supposing, then, the relation of the sign to its object does not lie in a mental association, there must be a direct dual relation of the sign to its object independent of the mind using the sign … the sign signifies its object solely by virtue of being really connected with it. Of this nature are all natural signs and physical symptoms. I call such a sign an index,

> a pointing finger being the type of the class. The index asserts nothing; it only says "There !" It takes hold of our eyes, as it were, and forcibly directs them to a particular object, and there it stops.
>
> (Peirce 1885, 180–181)[8]

Like the indexical relation between smoke and fire, the indexical relation between Piwonski's "ideal silence" and its cause is independent of human agency. It is the product of the exercise of the documentality of an event occurring in the Sobibór concentration camp. The dematerialization of an event's documentality by reducing the function of documents to the communication of mental representations avoids ethical and moral consequences of the erasure of the object or event that occasions attunement to it. Communication is but an accidental property of documentation.

Third site: the articulation of things

Latour's insistence on the agency of things helps us think about documentality as a property of a thing, which is expressed in the augmentation or diminution of its capacity to act in its arrangements with other things. In the fourth chapter of *Pandora's Hope*, Latour seeks an alternative to what he calls the "old settlement," that bifurcation between active minds and mute, inert nature. His better settlement includes an "understanding of what the entities of the world do" (Latour 1999, 114) – that is, one in which *things* have agency.

One of his concepts that does the work is *articulation*. In his laboratory, Louis Pasteur presented to his lactic acid ferment the occasion to come into contact with other entities. By entering into new associations with them, the lactic acid ferment exercises its agency. Latour writes, "through the artifices of the laboratory, the lactic acid ferment becomes articulable. Instead of being mute, unknown, undefined, it becomes something that is being made up of many more items" (143). According to his relative ontology, the lactic acid ferment becomes more real the more articulable it becomes. He says the advantage of the concept of a thing's articulation (his examples are scientific practices, but there is no reason to restrict the concept to them) is that it "[s]tresses the *independence* of the thing" (140; my emphasis). This independence is captured in the idea of documentality as referring to a specific actualization of the thing's agency.

Latour's case of Pasteur also references a more familiar sense of the thing's documentality. Of the lactic acid ferment, he observes:

> There are, quite simply, more and more things to say about it, and what is said by more and more people gains in credibility. The field of biochemistry becomes, in every sense of the term, "more articulate" – and so do the biochemists. Actually, thanks to Pasteur's ferment, they come into existence *as* biochemists, instead of having to choose between biology and chemistry.
>
> (143–144)

"[M]any more [journal] articles" (143) are among the "many more things" the lactic acid is made up of by coming into contact with them after the occasion of the laboratory set-up. The documentality of the lactic acid ferment is increasingly articulated as it enters into associations with more and more articles, with what scientists say, and with the development of a new scientific discipline. Briet noticed that the antelope's documentality consists in a network of associations of the documentary kind; Latour notices the same phenomenon in the case of Pasteur's lactic acid ferment.

On the documentality of things

I now want to bring the concept of documentality back to the antelope. There are over 90 species of antelope, each with characteristic size, shape, and habitat. Each species adapts its behavior, learning and strategies to its ecological niche, whether forest, swamp, desert, Savannah, steppe, or rocky terrain. Each animal expresses its uniqueness by its distinctive variations on these adaptations and through specific characteristics, such as gait, degrees of aggression or submission, defense strategies, and mating behavior that includes athletic dancing, plumage displays, and vocal challenges. Each combination of characteristics constitutes the individual animal's "signature," which creates affordances for specific kinds of interactions with other creatures, such as mates, competitors, predators, and humans with a variety of interests. If an antelope is covered by sediment soon after death, some of its remains become fossilized, leaving an external mold in the rock. Eventually the antelope's remains disintegrate into molecules, but even then its chain of traces continues insofar as those molecules deflect the path of others. The antelope's documentality consists in the entire chain of the antelope's unique traces, from birth to death and beyond. Its traces express its documentality, which is a property of that antelope in its arrangements with elements of its ecological niche. Very little of its expression has anything to do with humans, and certainly none of it need have anything to do with humans, even though humans are given to inventing and installing trace-capturing devices at specific stages of specific material processes for their own documentary reasons.[9] The world's documentality not only overflows human interventions but makes them possible.

In "Deleuze and the genesis of form," Manuel DeLanda presents an argument he makes elsewhere, against the "conception of matter as an inert receptacle for forms that come from the outside," replacing it by a concept of a real virtuality that "constitutes the nuomenal machinery behind the phenomena," that is, behind reality as it appears to humans (DeLanda 1998). DeLanda writes that once we understand "the Deleuzian world of material and energetic flows," we realize that this "real virtuality governs the genesis of all real forms," and that "the genesis of form [is] not transcendental but immanent to matter itself." He points to his familiar examples of soap bubbles and salt crystals; their respective forms as spheres and cubes are not imposed upon inert matter from without but are actualizations of the arrangements of their material and energetic flows. At the end of this

chapter he makes a move that connects his reflections to documentality. To deflect any misunderstanding that by real virtuality Deleuze refers to digitized virtual reality, he remarks that nonetheless, since "real virtuality governs the genesis of all real forms, it cannot help but be related to virtual realities, not only those created by computer simulations, but also by novelists, filmmakers, painters and musicians." It would follow that real virtuality governs the genesis of documentary forms. DeLanda goes on to say that the movement of thought "should be from a rich material world pregnant with virtualities" to literature, art, texts, discourses, and metaphors, rather than the other way around, when these are treated as forms imposed upon inert matter. Briet's antelope leads thought about documentation to a rich material world pregnant with documentary virtualities.

My aim is to situate the concept of documentality in a conceptual space of agency, power, force, affect, materiality, potentiality, and real virtuality. Documents are *things* in Latour's sense. For him a "thing" is the "matter of concern" that holds an assemblage together. A thing energizes or activates an assemblage; borrowing from Heidegger, he calls it a "gathering." An object, by contrast, is "simply a gathering that has failed" (Latour 2004, 246). Latour's "things" have some of the properties of those topological singularities that create the forms of DeLanda's soap bubbles and salt crystals: they organize elements of an assemblage. Humans make documents and attune themselves to them, gather around them, wage disputes over them, enroll them as allies, and deploy them to direct and even to make up people, including ourselves.[10] DeLanda and Latour's meditations on materiality suggest investigations of a wide range of interesting and remarkable manifestations of documentary energies and intensities, and pose the task of creating concepts to articulate them.

The concept of the documentality of things has an ethical component. Because it cannot be developed here, I will just gesture toward it, first by reference to Heidegger's "age of the world picture." He argues that two decisive events of the modern age are the simultaneous transformation of the world into picture and man into a representing subject (Heidegger 1977, 133). "Representing," he writes, is "an objectifying that goes forward and masters" (150); what it means *to be* becomes *to be represented*. Subjectivity gains in power to the degree that "the planetary imperialism of technologically organized man" becomes "the surest instrument of total, i.e. technological, rule over the earth" (152). The truth of being itself "will be given over to man when he has overcome himself as subject, and that means when he no longer represents that which is as object" (154). But in the age of the world picture, documentation is subordinated to and dominated by representation, thereby perpetuating modern western philosophy's privilege of representation over being, and the technological domination of the world of things. When representation dominates, the master sign becomes Peirce's *icon*:

> in contemplating a painting, there is a moment when we lose the consciousness that it is not the thing, the distinction of the real and the copy

> disappears, and it is for the moment a pure dream … At that moment we are contemplating an *icon*.
>
> (Peirce 1885, 181)

In the age of the world picture, Hillis's analysis of experience in web environments becomes a global condition: "the hallucinatory desire to make something present not only stand in for something absent but also to make it, experientially, equivalent to what has gone missing, remains elsewhere, or can never be" (Hillis 2009, 117; see also his paper in this volume).

My second reference is to Michel Serres's small book *The Natural Contract* (1995). His powerful first chapter opens with an image from Goya: two combatants armed with clubs, battling each other but knee-deep in mud. They fight, oblivious to the earth swallowing them up. Serres finds in this ghastly image the catastrophe of forgetting "the world of things themselves" (Serres 1995, 2). Our wars, our economies, the footprint of humans gathered into what he calls "immense tectonic plates" (18), and our culture, which he says "abhors the world" (3) inflict immense, global, and likely catastrophic violence upon "the world of things themselves." It is time, he argues, that we make a contract with the world: a natural contract, because "[w]hat was once local – this river, that swamp – is now global: Planet Earth" (3). To do so, we need to think beyond human subjectivity and hallucinatory desire, and engage a concern for the agency, materiality, and arrangements of things. I want to situate the concept of the documentality of Mme Briet's antelope here, to direct some attention to and respect for this now fragile world of things, if only because reducing violence to it has become a matter of collective survival.

Notes

1 The primary sites of the resurgence of scholarly interest in documentation are the Department of Documentation Science, University of Tromsø, Norway, and the Document Academy's annual DOCAM conferences. Michael Buckland's writings are indispensable, as are those of Boyd Rayward. An important work from the Tromsø group is *A document (re)turn: Contributions from a research field in transition* (2007). For anthropology's interest in documentation, see Annelise Riles's *The network inside out* and her anthology, *Documents: Artifacts of modern knowledge* (2000, 2006). For a media-theoretic approach to documentation, see Cornelia Vismann's *Files: Law and media technology* (2008). For my work on documentation, see Frohmann (2001, 2004a, 2004b, 2007a, 2007b, 2008, 2009).

2 David Levy's *Scrolling Forward* is a good example of such reductionism: documents are "talking things"; writing "is the act of breathing our breath into the dust of the earth"; it is "an act of ventriloquism, of throwing the voice into an inanimate object"; documents are "bits of the material world we have taught to talk"; they are "exactly those things we create to speak *for us*, on our behalf and in our absence" (Levy 2001, 23, 25, 26).

3 My use of "arrangements" invokes but is not intended to imply fidelity to Deleuze's *agencement*, which has most often been translated as "assemblage" (see Phillips 2006). Deleuze adapts a word which refers to arrangements such as the layout of goods in a shop (*agencement de magasin*) or the organization of a color scheme (*agencement des couleurs*). *Agencement* suggests design, a sense missing

from the French *assemblage*, which refers to assembly lines, building construction, and various setups of material things; its pejorative use to signify a mere concoction is a close cousin to the verb *assembler* in its sense of merely piling up. A Deleuzian *agencement* has design but no designer, because the design is immanent and emergent. In what follows, "arrangements" is the preferred term, except where "assemblage" is more appropriate to the context (for further discussion, see chapters by Wise, and by Wiley, Moreno, and Stuko in this volume).

4 In his 2001 and 2006 work, Ron Day shows the importance of science to Briet's conception of documentation, which accounts for her privileging the role of evidence.

5 At DOCAM '06, two doctoral student papers focused on disciplinary documentation. Kristene Unsworth presented a paper on the documentary apparatus of the German Democratic Republic, a régime with an intense interest in the documentary technologies of domestic spying and personal file production. At DOCAM '06 and DOCAM '08, Marc Kosciejew spoke about the documentary machine of the South African apartheid state.

6 For the concept of affordances, see Gibson (1977, 1986, Chapter 8).

7 Manuel DeLanda (2007) talks about the *expressivity* of animals and things in his lectures on Deleuze. Deleuze and Guattari (1987, 315–316) connect the expressivity of animals to territorialization.

8 For a very skillful use of Peirce's notion of indexical sign in his analysis of virtual environments, see Chapter 3 of Hillis (2009) and his chapter in this volume.

9 I am indebted to Ethan O'Connor's masterful presentation of this example at the March 2009 DOCAM conference in Madison, Wisconsin. My brief exposition here cannot do justice to his.

10 The reference to making up people invokes Hacking's (2002) famous paper and two of his books (1995, 1998).

References

Briet, S. 2006. *What is documentation?* Trans. and edited by R.E. Day, L. Martinet, and H.G. Anghelescu. Lanham, MD: Scarecrow Press.

Day, R.E. 2001. *The modern invention of information: Discourse, history, and power.* Carbondale, IL; Edwardsville, IL: Southern Illinois University Press.

Day, R.E. 2006. "A necessity of our time": Documentation as "cultural technique." In *What is documentation?* Trans. and edited by R.E. Day, L. Martinet, and H.G. Anghelescu, by S. Briet. Lanham, MD: Scarecrow Press.

DeLanda, M. 1998. Deleuze and the genesis of form. Retrieved August 28, 2009 from http://www.cddc.vt.edu/host/delanda/pages/genesis.htm

DeLanda, M. 2007. The philosophy of Gilles Deleuze. Retrieved July 8, 2007 from http://www.youtube.com/watch?v=zqisvKSuA70&;feature=user

Deleuze, G., and F. Guattari. 1987. *A thousand plateaus: Capitalism and schizophrenia*. Trans. B. Massumi. Minneapolis, MN: University of Minnesota Press.

Ferenbok, J. 2009. The identity myth: "The face" in technologies of citizenship. Ph.D. diss. Toronto: University of Toronto.

Frohmann, B. 2001. Discourse and documentation: Some implications for pedagogy and research. *Journal of Education for Library and Information Science* 42(1):13–26.

Frohmann, B. 2004a. *Deflating information: From science studies to documentation*. Toronto: University of Toronto Press.

Frohmann, B. 2004b. Documentation redux: Prolegomenon to (another) philosophy of information. *Library Trends* 52(3):387–407.

Frohmann, B. 2007a. Multiplicity, materiality, and autonomous agency of documentation. In *A document (re)turn: Contributions from a research field in transition*, eds. R. Sklare, Niels Windfeld Lund, and Andreas Vårheim, 27–39. Frankfurt am Main: Peter Lang.

Frohmann, B. 2007b. The role of facts in Paul Otlet's modernist project of documentation. In *European modernism and the information society: Informing the present, understanding the past*, ed. W.B. Rayward, 75–88. Aldershot: Ashgate.
Frohmann, B. 2008. Documentary ethics, ontology, and politics. *Archival Science* 3(8):165–180.
Frohmann, B. 2009. Revisiting "What is a 'document'?". *Journal of Documentation* 65(2):291–303.
Gibson, J.J. 1977. The theory of affordances. In *Perceiving, acting, and knowing: Toward an ecological psychology*, eds. R. Shaw and J. Bransford, 67–82. Hillsdale, NJ: Lawrence Erlbaum Associates; New York: distributed by the Halsted Press Division, Wiley.
Gibson, J.J. 1986. *The ecological approach to visual perception*. Hillsdale, NJ: L. Erlbaum.
Gray, R.T. 2004. *About face: German physiognomic thought from Lavater to Auschwitz*. Kritik. Detroit, MI: Wayne State University Press.
Groebner, V. 2007. *Who are you?: Identification, deception, and surveillance in early modern Europe*. Trans. M. Kyburz and J. Peck. Brooklyn, NY: Zone Books.
Hacking, I. 1995. *Rewriting the soul: Multiple personality and the sciences of memory*. Princeton, NJ: Princeton University Press.
Hacking, I. 1998. *Mad travelers: Reflections on the reality of transient mental illnesses*. Cambridge, MA: Harvard University Press.
Hacking, I. 2002. Making up people. In *Historical ontology*, 99–114. Cambridge, MA: Harvard University Press.
Heidegger, M. 1977. The age of the world picture. In *The question concerning technology and other essays*, Trans. and Introd. by W. Lovitt, 115–154. New York: Harper and Row, Harper Colophon.
Hillis, K. 2009. *Online a lot of the time: Ritual, fetish, sign*. Durham, NC: Duke University Press.
Latour, B. 1999. *Pandora's hope: Essays on the reality of science studies*. Cambridge, MA: Harvard University Press.
Latour, B. 2004. Why has critique run out of steam? From matters of fact to matters of concern. *Critical Inquiry* 30:225–248.
Latour, B. 2008. *What is the style of matters of concern?* Amsterdam: Van Gorcum.
Levy, D.M. 2001. *Scrolling forward: Making sense of documents in the digital age*. New York: Arcade: Distributed by Time Warner Trade.
Marks, A. 2008. What do noses really know? *The Guardian Weekly*, 11–17 April, 30–31.
Peirce, C.S. 1885. On the algebra of logic: A contribution to the philosophy of notation. *American Journal of Mathematics* 7(2):180–196.
Peirce, C.S. 1960. Collected papers. eds. C. Hartshorne and P. Weiss. Cambridge, MA: Belknap Press of Harvard University Press.
Phillips, J. 2006. Agencement: On the translation of agencement by assemblage. In Deleuze and Guattari. Retrieved December 7, 2010 from http://courses.nus.edu.sg/course/elljwp/deleuzeandguattari.htm
Riles, A. 2000. *The network inside out*. Ann Arbor, MI: University of Michigan Press.
Riles, A., ed. 2006. *Documents: Artifacts of modern knowledge*. Ann Arbor, MI: University of Michigan Press.
Serres, M. 1995. *The natural contract*. Trans. E. MacArthur and W. Paulson. Ann Arbor, MI: University of Michigan Press.
Sklare, R., L.N. Windfeld, and Andreas Vårheim, eds. 2007. *A document (re)turn: Contributions from a research field in transition*. Frankfurt am Main: Peter Lang.
Vismann, C. 2008. *Files: Law and media technology*. Trans. G. Winthrop-Young. Meridian. Stanford, CA: Stanford University Press.
Whitehead, A.N. 1920. *The concept of nature. Great books in philosophy*. Cambridge: University Press.

Chapter 12

Subjects, networks, assemblages

A materialist approach to the production of social space

Stephen B. Crofts Wiley, Tabita Moreno Becerra, and Daniel M. Sutko

> The old and assumed isomorphism between culture, polity, and territory is no longer to be taken as given. The fundamental principle upon which national cultures and communities have been predicated has been called into question.
>
> (Kevin Robins, 2007, p. 158)

What is the territory of a human being? Where are the borders of the society or culture to which a given person belongs? If a society is a collective composed of subjects who share social, political, and economic relations, what are the boundaries around those relations? What is the radius of a citizen's public sphere, and where do its edges bump up against other spheres of discourse and governance? At the outset of the twenty-first century, in the context of transnational migration and travel, neoimperial military and economic interdependencies, and planetwide technical networks of entertainment and surveillance, the notion of a discrete, coherent social space – "a society," "a culture" – has become deeply problematic. The precise logics and ultimate consequences of globalization may remain unclear. However, as noted by Kevin Robins in the epigraph above, it is quite apparent that the ontological assumptions, theoretical frameworks, and methodological tools inherited from modern social theories that were predicated on the notion of *a society* are inadequate for conceptualizing the current state of affairs. Modern social theory took shape as national economies, governments, communication infrastructures, and cultures became more cohesive and reified; consequently, the mark of the nation is deeply inscribed on nineteenth- and twentieth-century thought. If the nation has been an imagined community not only for the masses (Anderson, 1991) but also for theorists – a container of thought not only for popular belief but also for theory – how do we now reconceptualize and investigate the new, more rhizomatic, contours of social space?

In the context of mobility and translocal connectivity, our aim must be to *discover* the contours of social space without presuming to know them in advance – to *follow the flows* that reveal the connections and relationships that are salient for a given subject. A materialist theory of communication

provides a useful starting point for this task. If we understand communication not as the transmission of meaning but as the production of a common social territory in which geography, mobility, and economic relations play as much a role as the circulation of information and the sharing of language and cultural practices (Carey, 1989, 1997), it becomes apparent that our first question should be, who is connected to whom?

In this chapter, we develop a conceptual model of social space grounded in a materialist understanding of communication. We begin with the basic Marxist premise articulated by Henri Lefebvre (1974, 1991): that the production of space is *the production of the social relations of production*. Because the social relations of production (and reproduction) are often translocal and transnational, we draw on network theory to develop a conceptual framework for the analysis of social space as non-Euclidean (Appadurai, 1990) and rhizomatic (Deleuze and Guattari, 1987). In our view, the social space of a given subject is simultaneously expressed in and constituted by three kinds of interrelated networks: *social networks*, or networks of social relations, including relations of production and consumption (Adams, 2005; Lefebvre, 1991; Marx, 1972 [1849], 1904) and relations of family and friends (Hannerz, 1996; Morley, 2000; Rouse, 1995; Wellman, 2001), *geographical networks*, or networks of mobility and emplacement (Carrasco *et al.*, 2008; Clifford, 1989, 1992; Larsen *et al.*, 2006; Marcus, 1995; Massey, 1993; Sinclair and Cunningham, 2000), and *technical networks*, or networks of mediated communication (Castells, 1996, 2009; Fuller, 2005; Hansen, 2006; Morley and Robins, 1995; Sinclair and Cunningham, 2000). We understand a given subject's practices or *activities* as an actualization of all three of these networks. Finally, we bring in the concept of *agencement* (Deleuze and Guattari, 1987) or assemblage (DeLanda, 2006; Marcus and Saka, 2006; Wise, 2005) to describe the consistency and effectivity of the molar arrangements that govern certain portions of a subject's networks and activities. In closing, we offer some brief reflections on the methodological implications of defining social space in this way.

A materialist theory of social space begins with a focus on the social relations of production (Marx, 1972 [1849]), the means by which human beings transform nature and reproduce their survival as a species, which they do collectively and in particular spatial arrangements, like other social animals such as ants. From this standpoint, communication is, most fundamentally, a spatiotemporal process of *arrangement* – of bodies, brains, and materials – for the production and reproduction of life, an *agencement* (Deleuze and Guattari, 1987) or assembling that composes relations for specific purposes. Within the Marxist tradition, the key theorist of social space is Henri Lefebvre (1991). For Lefebvre, the production of space is, most fundamentally, a spatial organization of the social relations of production – a matter of organizing infrastructure, capital, the built environment, and people spatially *for* the reproduction of capitalism.[1] Yet Lefebvre, like many other

modern theorists of society and culture, sought to address the production of space "in a given society" (Lefebvre, 1991, pp. 33, 182, 215). We must now ask how space is produced when capitalism is increasingly globalized, networked, and information-driven … when nations, regions, and cities are increasingly reorganized in relation to a globalizing logic of network power (Castells, 2009) and empire (Hardt and Negri, 2000). How is social space conceived, practiced, and lived (Lefebvre, 1991) now that people are understood not only as inhabiting globalized cities (Massey, 1993; Sassen, 2000a, 2000b, 2007) and rhizomatic media ecologies (Fuller, 2005; Hansen, 2006) but are also recognized as mobile (Sheller and Urry, 2006) and connected to distant others (Adams, 2005; Giddens, 1991; Morley, 2000) – when their relation to *any specific* place, nation, city, or cultural field has become unpredictable?

The increasing complexity of social relations, mobility, and mediated connectivity in late modernity requires a new approach to the study of social space – one which does not start with a sweeping, metahistorical narrative about the transformation of place and space (Castells, 1996) but begins, instead, with what is happening on the ground: with empirical fieldwork that will allow us to *discover* the realities of spatial transformation that people are (or *may* be) actually experiencing (Murphy, 2005; Murphy and Kraidy, 2003, 2006; Sassen, 2007). The point is not that the nation, the city, or other archetypal modern forms of spatial organization are obsolete (Waisbord and Morris, 2001), but rather that we simply do not know, for lack of empirical research, how logics of capital, logics of nationality, logics of government and security, and other logics of spatial organization come together to constitute places and to shape the practices and lived experience of space for a specific person or community. Because people are mobile, involved in distanciated social relations, and connected to translocal networks of media and information, they may be articulated to any number of constellations of social relations, to multiple modes of production, and to diverse representations of space operating on a range of scales. We can no longer be certain that their momentary, immediate geographical surroundings define their place. Instead, we need to *discover* how subjects are linked, via their practices, to particular places and patterns of mobility, to specific technical media and fields of discourse, and to certain networks of other people … and we need to *discover* how they experience place, space, and mobility as an expression of those connections.

But how do we discover *which* places, relations, networks, and meanings are salient for a particular individual or collective subject? To answer that question, we propose an analytical strategy based on three premises: methodological individualism, a "hydrological" strategy for the analysis of flows, and the concept of *agencement* (arrangement or assemblage). We begin with particular subjects, their spatial practices, and their spatial representations – not as discrete, autonomous monads but as concrete lives (Deleuze, 2005; Ferrarotti, 2007; Sotirin, 2010) unfolding at the intersection of conceived,

perceived, and lived space (Lefebvre, 1991). We then work inductively, "following the flows" back upstream (Deleuze and Guattari, 1987, p. 454) to discover the salient arrangements or assemblages (DeLanda, 2006; Deleuze and Guattari, 1987; Wise, 2005) to which that subject is linked. As an alternative to Euclidean assumptions about the location of power, culture, capitalist production, and subjectivity within coherent, coterminous territorial containers (Appadurai, 1990), a hydrological approach in combination with assemblage theory allows us to identify the forces operating in the milieu of a subject without assuming that geographical or cultural proximity determines relevance. Our aim is not simply to rethink place, but rather to *discover the social space of an individual* – a social space composed of networks of social relations, mobilities and emplacements, and selective appropriations of all kinds of discursive materials.

Subjects, activities, networks, and assemblages: a conceptual model of social space[2]

The model we are employing to define and analyze social space draws on four basic concepts: assemblages, networks, activities, and subjects (see Figure 12.1). *Assemblages* link subjects (whether individual or collective), via networks and activities, to particular arrangements of bodies, technologies, and materials in order to do something – to enable the production of surplus value, to produce citizens, to move or secure populations or resources, to expand human knowledge and develop technologies, to manage and direct force and violence, to create community and solidarity, and so on. *Networks* (in the center of the model) are the virtual links – that is, the potential articulations, or ties – that connect subjects to assemblages. We focus on social networks, geographical networks, and networks of technical media.

Much has been written about networks, but here we are proposing to *reimagine networking as assembling*, an argument which will be developed below. *Activities* – the things we do everyday, alone and with others – are actualizations of networks; that is, they actualize the virtual links of one's networks by expressing virtual (potential) relations in actual activity.[3] Finally, *subjects* are human individuals or collectives that perceive, experience, and define reality from a particular perspective and position within relations of power (Foucault, 1982).

We are specifically interested in the ways in which subjectivity entails lived experiences of space and place, which in turn enables spatial practices (Lefebvre, 1991, p. 38). As indicated in the model (on the right-hand side, within the box labeled subject), we break down lived experience of space into sense of place, sense of territory, and sense of space (see below). Finally, our model includes *sociospatial agency*: subjects are *subjects of* their activities as well as being *subjected to* the effects of power (Foucault, 1982, p. 781). We

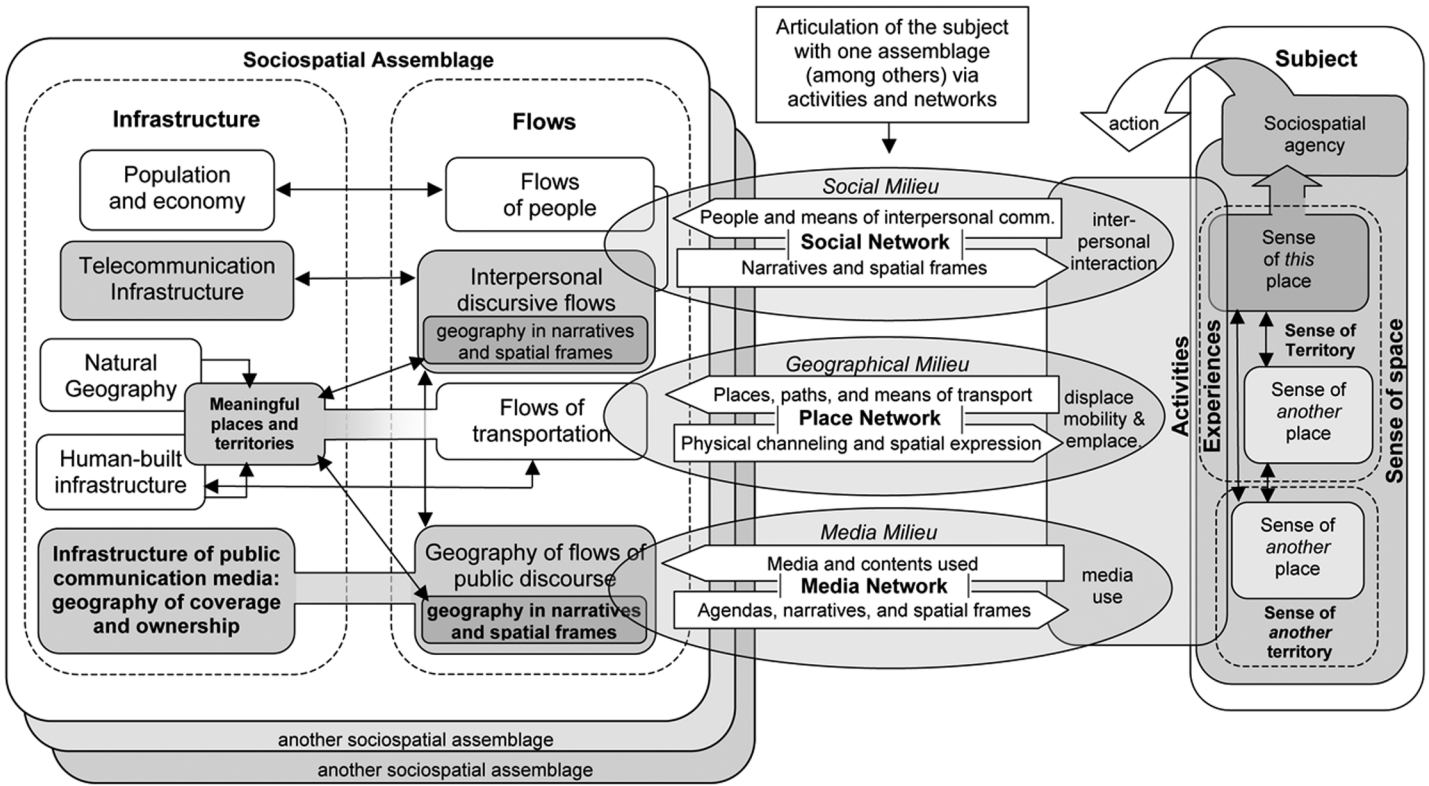

Figure 12.1 Conceptual model of social space.

now develop each of these elements of the model – assemblages, networks, activities, subjects, and agency – in greater detail.

The first element of the model (on the far left of the diagram in Figure 12.1) is the assemblage, or more precisely, a constellation of multiple assemblages to which a given subject is articulated. Assemblages, in this model, are the bundles of arrangements and logics that shape a subject's emplacement, mobility, and connectivity – that is, their social space – with the aim of producing a specific effect. Assemblages are compositions of heterogeneous elements "deducted from the flows" (Deleuze and Guattari, 1987, p. 448) and made to function according to a certain set of logics. As these elements are brought into relations of composition with one another, they constitute a specific territory for a certain duration and code the component elements, and the assemblage as a whole, according to specific discursive categories and rules (DeLanda, 2006; Deleuze and Guattari, 1987; see also, Wiley, 2005; Wise, 2005). As an initial approximation, assemblages may be thought of as similar to organizations or systems (DeLanda, 2006). However, in opposition to the reification and functionalism that often characterizes systems theory and organizational theory (and, at times, DeLanda's own analysis), the concept of assemblage emphasizes the heterogeneity of the incorporated elements; the incompleteness of their functional integration; the constitutive force of the relations of content/expression that hold the elements together; and the dynamic, unfolding quality of the elements, and of the assemblage as a whole. If we retain the connotations of the original French word employed by Deleuze and Guattari, *agencement*, it is clear that an assemblage is better thought of as an *arrangement* or an *assembling*, and more specifically as an *assembling for* – that is, as a mustering or gathering together of elements – people, materials, activities, and signs – with specific capacities and in the service of particular logics or aims (Wiley, 2005; Wise, 2005). Assemblage theory gives us a way of thinking about what is connected to what, and about what matters in a given context, without assuming a Euclidean, Westphalian geography of stable, coherent containers with coterminous borders (Appadurai, 1990), and without assuming that geographical proximity determines social, economic, or cultural salience.

Three additional points about the application of assemblage theory must be clarified before we move on. First, assemblages do not necessarily correspond to traditional social, cultural, and political entities, which are generally imagined to be contained within, and coterminous with, coherent geographical territories. DeLanda (2006) analyzes nations as examples of assemblages, for example, but it would be more accurate to include, as part of a nation assemblage, any elements anywhere that are subjected to that specific logic of nationality. Following this approach, there is an US-assemblage that is not limited to the official borders of the United States. It incorporates all the places, practices, and people, wherever they may be,

who are governed by a logic of US Americanness (however we might specify that logic). This would include not only employees of the US government and military stationed around the world but also entire cultural enclaves surrounding military bases, expatriate communities, Sheraton hotels, and tourist circuits more broadly, as well as the many sites in which other non-US citizens are drawn into, or subjected to, logics of Americanization via military action, corporate ownership, language, media use, subcultures of personal style, economic relations, political discourse, and so on. The topology of an assemblage, then, is not defined by official borders or common-sense assumptions, but rather by following the flows to find all the places in which the logics of the assemblage are operating.

Second, it must be emphasized that subjects are caught up, simultaneously, in *multiple* assemblages. A person, for example, may be simultaneously a family member, a laborer, a national citizen, a fan of a global rock band, and a follower of a religion; each one of these subject positions may be linked to a specific assemblage, or a single assemblage may place the person in multiple subject positions simultaneously: the church-sponsored Christian rock concert captures a family and positions the man simultaneously as a father, a fan, and a believer. In other words, the goal of analysis is not to identify the one assemblage "in which" a subject is located (e.g., a nation-state assemblage or a city as assemblage), but rather to discover *the entire constellation of assemblages* that exert force in that subject's life, linking him or her into multiple – sometimes contradictory, sometimes resonant – roles and relations. It is this constellation of assemblages and the ways in which they position a subject that explains the complex, changing, and apparently idiosyncratic patterns of mobility, emplacement, social interaction, and communication that characterize a life.

Third, we must point out that assemblages themselves are dynamic, mobile, and temporal; the apparent stasis and durability of some macro-assemblages such as institutions or cities is a product of our human-centered temporal perspective, which is characterized by relatively short-term existence and relatively high mobility. From a longer-term perspective, however, even apparently durable assemblages such as empires, cities, and political regimes appear ephemeral: empires fall; centers of business and residence that thrived in earlier times are now ghost towns; regions ruled by military regimes in the past are now governed by civilian leaders while democratic regimes in other areas are subjected increasingly to logics of security, surveillance, and control. In our analysis of social space, we must take care to avoid reifying existing states of affairs and assuming that existing centers of power, territories, and relations will necessarily endure or maintain their present-day configuration. A key advantage of assemblage theory is that it allows us to *discover* emerging networks, embryonic relations of power, and evolving territories – precisely the forms of social organization that we suspect may accompany increased mobility and connectivity.

Assemblages, milieus, and networks

Assemblages are constituted via territorialization and coding of milieus (Deleuze and Guattari, 1987), a process that draws from the surrounding world (the milieu) to produce specific linkages and relations according to specific logics. These connections articulate, or link, the subject to the assemblage, a process that leads to what have popularly been called *networks* (Castells, 2009; Wellman, 2001). In fact, we propose to reinterpret "networks" from the standpoint of assemblage theory. Networks (or networking) can be understood as the work of tying subjects into social relations – the process of linking or articulating subjects into assemblages. More precisely, networks can be thought of as sets of virtual articulations – *potential* linkages – which are actualized through activities or practices Deleuze (1994). In this conceptual model, we pay attention to three kinds of networks that we see as critical for linking subjects to assemblages: social networks, networks of technical media, and geographical networks.

Social networks
Within *social milieus* – the populations through which we move and with which we are potentially connected – we enter into, or are caught within, *social interactions* whose virtual dimensions are *social relations* and *social networks*.

Networks of technical media
Within *technological milieus* – the infrastructures, technologies, and media that surround us – our attention is captured and focused on specific *sources and discourses* whose virtual elements are *networks of technical media*.

Geographical networks
Within *geographical milieus* – the built and natural environments through which we move, including the available infrastructures and technologies of mobility, we enact specific *practices of mobility and emplacement*; the virtual element of these spatial practices are geographical networks, or *networks of mobility and emplacement*.

In each of these cases, we distinguish between milieus, actual practices, and virtual networks. Milieus are the surroundings from which specific elements are selected (Deleuze and Guattari, 1987, p. 245) Practices are activities (including physical actions as well as statements and other incorporeal acts) that actualize our various networks. Networks are the virtual, or *potential*, elements and relations that make up our social space – geographies, people, and media that we perceive, remember, imagine, or desire. These types of network are not expressions of individual freedom and choice but are rather the modes by which a subject is linked to assemblages. In other words, we are not autonomous architects of our social, communicational,

and geographical networks; we are born into *nets* that were already *working* on us before we came along.

All three of these networks and modes of articulation are actualized, or expressed, in a person's practices or activities. Any specific activity that a subject undertakes is the product of the *multiple articulations* that link that subject simultaneously into *a whole constellation of* assemblages acting in that subject's milieu. Furthermore, activities themselves depend on the salience and power of one assemblage's shift in time and space in relation to others. For example, as one moves through one's daily activities, one experiences the shifting, overlapping salience of the family assemblage and the work assemblage.

The subject

Finally, the model focuses attention on several specific elements of subjectivity that are relevant for conceptualizing a subject's lived experience of space: *sense of place, sense of territory*, and *sense of space*. We define sense of place as the set of meanings, affects, and expectations that a subject associates with a place, including an understanding of the characteristics of the people, activities, and physical components "appropriate" to the place. Sense of place is fundamentally *relational*, so that my experience of *this* place is defined in relation to *other* places, whose positive or negative differences make this place distinctive and meaningful (this is *my* house, not yours; this is *my* country, not theirs). Out of our knowledge and experience of multiple places, we develop a *sense of territory* – a space imagined and experienced as the container of past, current, and potential future activities, within which a subject locates his own places and/or the places of others. Like sense of place, sense of territory can be socially constructed on any scale, but a territory is always understood in relation to a set of places, as the container of those places. Finally, *sense of space* is the overall set of relational meanings, affects, and expectations within which a subject understands and experiences *all* the places and territories she knows (whether these have been experienced corporeally, through embodied practices, or incorporeally, via place images and narratives circulated in the media and the accounts of others). Our sense of space positions us, cognitively and affectively, in relation to the places and territories we know (our own and others'), the practices of mobility and stopping that structure our everyday life, and the associated activities and social relations that we experience in places and in movement. It is perhaps not so different from what sociologists once called a "worldview," or what Raymond Williams famously called "a whole way of life."

Conclusions: biographical starting points and a hydrological method

The methodological challenges entailed in applying this model to research on social space and sense of place are substantial. The extent and

complexity of present-day transportation networks, social networks, and media networks, as well as the extensive and increasingly accelerated flows of populations, materials, and media content they facilitate, create significant challenges for research on actual configurations of social space. In order to *discover* what constellations of assemblages are at work constituting a subject's social space (rather than presuming to know this in advance based on a person's present geographical location, their birthplace, or their citizenship), we employ a strategy of methodological individualism,[4] which involves working inductively, from empirical research (right to left in our model) – from the subject and her activities to the networks, and finally to the assemblages. By methodological individualism, we mean that we must begin with a person – or perhaps more accurately, "a life" (Deleuze, 2005; Sotirin, 2010) – and follow the flows and connections that articulate him or her to all the assemblages to which he or she is linked. In this way, we can apply Deleuze and Guattari's call for a nomad science: a "hydraulic" (or, as we prefer, hydrological) approach to research (Deleuze and Guattari, 1987, p. 397, 454) in which one *follows the flows* outward (or inward) from a given starting point to discover the distant connections and the geographical, social, or cultural reach of the assemblages that are acting in the milieu of the subject.

A key point in our argument is that methodological individualism is necessary because, in the context of mobility and global connectedness, no two subjects are linked to the same set of assemblages, or linked in the same way. Because individuals are mobile, because they may inhabit distinct media and information ecologies, and because their social relations and networks may be translocal, it cannot be assumed that two people inhabiting (or working in, or passing through) a given urban area or national territory are members of a common society or that they share a common sense of place. Each person – each subject, in our model – practices and experiences space differently and, most significantly, may be articulated to different conceived spaces (Lefebvre, 1991) – that is to different dominant assemblages that compose social relations and produce space. For example, a university professor may belong to the same neighborhood and even to the same work assemblage as a university maintenance employee, but the professor is articulated to a translocal assemblage of academic knowledge production whose key sites of social interaction and information exchange are distributed across the globe. Methodological individualism allows us to follow those linkages and uncover the distant (or not so distant) assemblages shaping the social space of our interviewees.

Franco Ferrarotti's (2007) life history sociology provides us with an excellent theoretical rationale for this focus on the individual. Following Ferrarotti, we see individual lives as *syntheses of the social* and as lenses through which the social world can be understood in all its complexity. As Ferrarotti puts it, "our social system is completely within each of our actions, our dreams, fantasies, accomplishments, and behavior, and the

history of this system is completely within the history of our individual life" (ibid., p. 239). The individual biography is not seen as a representative (or unrepresentative) example of the social, but rather as a prism which refracts the social field in all its complexity, from a specific standpoint within the social field. Furthermore, the individual life is not determined by the social in a classical sociological sense but rather *expresses* the lived complexity and active appropriation of the social by the individual (ibid., p. 239).

It is the *implication*, or infolding, of the social in the individual that interests us. We intend for our analysis to work through individual accounts to illuminate the social – to work from the practices and experiences of individual subjects toward the articulations, networks, and assemblages that compose the rhizomatic social spaces of an increasingly globalized world. Much remains to be worked out, theoretically and methodologically, in this materialist model of social space. We hope that the initial conceptual elements proposed here provide a useful scaffold for future work.

Notes

1 Lefebvre's theory of the production of space is of course far more complex than this. However, in a lecture published in 1974, Lefebvre asserted, in an uncharacteristically straightforward manner, "It is in space, and through space, that the reproduction of the social relations of capitalist production are carried out" (1974, p. 223). For a more nuanced discussion of Lefebvre and social space, see Hay (2001, 2011).
2 For an initial development of this proposal, see Wiley *et al.* (2010).
3 We are employing the terms "virtual" and "actual" in a Deleuzian sense (Deleuze, 1994, pp. 183, 206–215).
4 Methodological individualism, it must be said right away, is not the same as an ontological commitment to the autonomy or individuality of subjects.

References

Adams, P. C. 2005. *The boundless self: Communication in physical and virtual spaces*. Syracuse, NY: Syracuse University Press.

Anderson, B. 1991. *Imagined communities* (Rev. ed.). London: Verso.

Appadurai, A. 1990. Disjuncture and difference in the global cultural economy. *Public Culture* 2(2): 1–24.

Carrasco, J. A., Miller, E. J., and Wellman, B. 2008. How far and with whom do people socialize?: Empirical evidence about distance between social network members. *Transportation Research Record: Journal of the Transportation Research Board* 2076: 114–122.

Carey, J. W. 1989.*Communication as Culture: Essays on Media and Society.* Boston: Unwin Hyman.

Carey, J. W. 1997. Afterword: The culture in question, in E. S. Munson, & C. Warren (eds.), *James Carey: A critical reader* (pp. 308–339). Minneapolis: University of Minnesota Press.

Castells, M. 1996. The space of flows, in M. Castells (ed.), *The information age: Economy, society and culture. Volume I: Rise of the network society* (Chapter 6, pp. 376–428). Malden, MA: Blackwell Publishers.

Castells, M. 2009. *Communication power.* London: Oxford University Press.

Clifford, J. 1989. Notes on Travel and Theory, in J. Clifford and V. Dhareshwar (eds.), *Traveling theories, traveling theorists* (Special issue of the journal Inscription). New York: Routledge.
Clifford, James. 1992. Traveling Cultures, in L. Grossberg, C. Nelson and P. Treichler (eds.), *Cultural studies*. New York: Routledge.
DeLanda, Manuel. 2006. *A new philosophy of society: assemblage theory and social complexity*. London and New York: Continuum International Publishing Group.
Deleuze, Gilles. 1994. *Difference and repetition*. Translated by Paul Patton. London and New York: Continuum International Publishing Group.
Deleuze, Gilles. 2005. *Pure immanence: Essays on a life*. Cambridge, MA: Zone Books.
Deleuze, Gilles, and Guattari, F. 1987. A thousand plateaus: Capitalism and schizophrenia. Translated by Brian Massumi. Minneapolis, MN: University of Minnesota Press.
Ferrarotti, F. 2007. Biography and the Social Sciences, in D. McCarthy (ed.), *Social theory for old and new modernities: Essays on society and culture, 1976–2005*, pp. 233–248. Lanham, MD: Lexington Books.
Foucault, M. 1982. The subject and power. *Critical Inquiry* 8(4): 777–795.
Fuller, Matthew. 2005. *Media ecologies: Materialist energies in art and technology*. Boston: MIT Press.
Giddens, A. 1991. *Modernity and self-identity: Self and society in the late modern age*. Cambridge: Polity Press.
Hannerz, U. 1996. *Transnational connections: Culture, people, places*. London: Routledge.
Hansen, M. B. N. 2006. *Bodies in code: Interfaces with digital media*. London: Routledge.
Hardt, Michael, and Negri, Antonio. 2000. *Empire*. Cambridge, MA, and London, England: Harvard University Press.
Hay, J. 2001. Locating the televisual. *Television New Media* 2(3): 205–234.
Hay, J. (2011). The Birth of the "Neoliberal" City and Its Media, in Packer, J., and Wiley, S. B. C. (eds.), *Communication Matters: Materialist Approaches to Media, Mobility and Networks* (Chapter 8). Milton Park, UK: Routledge.
Larsen, Jonas, Axhausen, Kay W., and Urry, John. 2006. Geographies of social networks: Meetings, travel and communications. *Mobilities* 1(2): 261–283.
Lefebvre, H. 1974. La produccion del espacio. Papers: Revista de Sociologia. No. 3. Available: http://www.raco.cat/index.php/Papers/article/view/52729
Lefebvre, H. 1991. *The production of space*. Malden, MA, USA; Oxford, UK; Victoria, Australia: Blackwell.
Marcus, George E. 1995. Ethnography in/of the world system: The emergence of multi-sited ethnography. *Annual Review of Anthropology* 24: 95–117.
Marcus, G. E., and Saka, E. 2006. Assemblage. *Theory Culture Society* 23(2–3): 101–109.
Marx, K. 1978 [1849]. Wage labour and capital, in Marx, K., and Engels, F. (eds.), *The Marx-Engels Reader* (Second Ed. Trans. R. C. Tucker). New York: W. W. Norton.
Massey, Doreen. 1993. Power-Geometry and a Progressive Sense of Place, in B. John, (eds.), *Mapping the futures: Local cultures, global change* (Chapter 4, pp. 59–69). London: Routledge.
Morley, D. 2000. *Home territories: Media, mobility and identity*. London: Routledge.
Morley, D., and Robins, K. 1995. *Spaces of identity: Global media, electronic landscapes, and cultural boundaries*. London: Routledge.

Murphy, P. 2005. Fielding the study of reception: Notes on "negotiation" for global media studies. *Popular Communication*.
Murphy, P. and Kraidy, M. 2003. *Global media studies: Ethnographic perspectives*. London: Routledge.
Murphy, P. and Kraidy, M. 2006. International communication, ethnography, and the challenge of globalization. *Communication Theory*.
Robins, Kevin. 2007. Transnational cultural policy and European cosmopolitanism. *Cultural Politics* 3(2): 147–174.
Rouse, R. 1995. Questions of identity: Personhood and collectivity in transnational migration to the United States. *Critique of Anthropology* 15(4): 351–380.
Sassen, Saskia. 2000a. Spatialities and temporalities of the global: Elements for a theorization. *Public Culture* 12(1): 215–232.
Sassen, Saskia. 2000b. *The global city*. rev. ed. Princeton, NJ: Princeton University Press.
Sassen, S. 2007. The Places and Spaces of the Global: An Expanded Analytic Terrain, in D. Held and A.G. McGrew (eds.), *Globalization Theory: Approaches and Controversies*. Cambridge, UK: Polity. pp. 79–105.
Sheller, M., and Urry, John. 2006. The new mobilities paradigm. *Environment and Planning A* 38: 207–226.
Sinclair, John, and Cunningham, Stuart. 2000. Go with the flow: Diasporas and the media. *Television & New Media* 1: 11–31.
Sotirin, P. 2010. Autoethnographic mother-writing: Advocating radical specificity. *Journal of Research Practice* 6(1), Retrieved April 25, 2011, from http://jrp.icaap.org/index.php/jrp/article/view/220/189
Waisbord, S., and Morris, N. 2001. Introduction: Rethinking Media Globalization and State Power. in S. Waisbord and N. Morris (eds.), *Media and Globalization: Why the State Matters*, pp. vii–xvi. Lanham, MD; Boulder, CO; New York and Oxford, UK: Rowman and Littlefield.
Wellman, Barry. 2001. *The persistence and transformation of community: From neighbourhood groups to social networks*. Report to the Law Commission of Canada. Toronto, Canada: Wellman Associates.
Wiley, S. B. C. 2004. Rethinking nationality in the context of globalization. *Communication Theory* 14: 78–96.
Wiley, S. B. C. 2005. Spatial materialism: Grossberg's Deleuzean cultural studies. *Cultural Studies* 19: 63–99.
Wiley, S. B. C. 2006a. Transnation: Globalization and the reorganization of Chilean television in the early 1990s. *Journal of Broadcasting and Electronic Media* 50(3): 400–420.
Wiley, S. B. C. 2006b. Assembled agency: Media and hegemony in the Chilean transition to civilian rule. *Media, Culture & Society* 28(5): 671–693.
Wiley, S. B. C., Sutko, D. M., and Moreno, T. 2010. Assembling social space. *The Communication Review* 13: 1–37.
Wise, J. Macgregor. 2005. Assemblage, in C. Stivale (ed.), *Gilles Deleuze: Key concepts*, pp. 77–87. Montreal and Kingston, Canada: McGill-Queen's Press.

Chapter 13

Vitalism, animality, and the material grounds of rhetoric

Byron Hawk

> For anyone undertaking a genealogical study of the concept of "life" in our culture, one of the first and most instructive observations to be made is that the concept never gets defined as such. And yet, this thing that remains indeterminate gets articulated and divided time and again through a series of caesurae and oppositions that invest it with a decisive strategic function in domains as apparently distant as philosophy, theology, politics, and – only later – medicine and biology. That is to say, everything happens as if, in our culture, life were *what cannot be defined, yet, precisely for this reason, must be ceaselessly articulated and divided*.
>
> (Giorgio Agamben 2004: 13)

This desire to investigate and rearticulate "life" does not escape the field of rhetoric any more than the disciplines Agamben identifies. Rhetoric typically saw vitalism as a form of romantic individualism centered on individual, human, unconscious ability or as a mystical, immaterial force that informed the material world. Both were seen in opposition to explicit, identifiable, and teachable rhetorical strategies. If rhetoric were grounded in individual talent or immaterial force, it could not be studied, understood, or taught (Young 1976, 1978). Such a position, however, not only ignores the fact that vitalism is an array of historically situated philosophies that cannot be reduced to these two generic positions, but it continues to operate through a division between the immaterial and material. Vitalism is cast as privileging the immaterial, which puts rhetoric in the position of privileging the material, in either reductive positivist terms or in terms of the human and the social. A traditional model of rhetoric continues to uphold divisions between language (as immaterial or abstract forms) and the world (as material realities that language represents), which situates human being (sometimes individual sometimes social) as the central agent of mediation between material world and immaterial language. But these divisions continue to create difficulties in theories of representation as well as politics that more contemporary versions of vitalism are attempting to rethink.

George Kennedy, a central figure in contemporary rhetorical studies, initially subscribed to the negative view of vitalism (1988). By the late 1990s,

however, he begins to change his views of vitalism in relation to rhetoric, but only to a certain extent. In *Comparative Rhetoric*, Kennedy begins his historical narrative with the rhetoric of social animals and sees a grounding energy, a certain rhetorical vitality, in animal life. He wants to extend the traditional definition of rhetoric as a conscious, human art or *techne* to something that can be grounded in the more habitual or innate aspects of nature (1998: 3). He writes:

> … rhetoric, in essence, is a form of mental and emotional energy. This is most clearly seen when an individual, human or animal, is faced with some serious threat or opportunity that may be affected by utterance. An emotional reaction takes place in the mind. The emotion may be fear, anger, lust, hunger, pity, curiosity, love – any of the basic emotions of sentient life. The probable source of such basic emotions, and thus for rhetoric, is in the instinct for self-preservation, which in turn derives from nature's impulse to preserve the genetic line.
>
> (3–4)

His position rests on the concept of conservation of energy. If a stag, for example, can "persuade" a rival to back down through vocal and gestural display, then he can establish dominance in the herd with less expenditure of energy than physical violence (13–14).

On the one hand, Kennedy is making a posthumanist move by seeing rhetoric cut across animal life as well as the human, and making a vitalist move by seeing rhetoric as a tacit form of mental energy or an emotional, relational force that flows between embodied life and its environment. In doing so, he directly rejects forms of Enlightenment humanism that draw a clear divide between human and nonhuman life (in particular Noam Chomsky who sees the human as a higher form). But on the other hand, he falls back on humanist and universalist perspectives, reading animal rhetoric backwards from human rhetorical categories. In his examples he regularly interprets animal acts across traditional, western rhetorical concepts: the section headers in his chapter are broken down across the traditional rhetorical categories – deliberative, judicial, epideictic, eloquence, and arrangement; he reads the stag's display across the traditional canons of rhetoric (14–15); and he reads bird songs in terms of arrangement and style (23–4). His comparative goal is to see rhetoric's "common source in nature" (13), but he supports this commonality by universalizing the western tradition of philosophical rhetoric and implying a progressive development of human rhetoric from animal antecedents.

By continuing to privilege nature and individual embodiment in either human or animal form, Kennedy continues to uphold the traditional divisions in rhetoric among language, reality, and humanity, which sidesteps the rhetorical and political issues that come with various redefinitions of life. As Agamben notes, the concept of life has never really been settled. Philosophers and scientists have continued the debate beyond the nineteenth

century versions of vitalism that argued life could not be reduced to mechanistic laws of physics and chemistry alone to contemporary understandings of evolution that see life as self-organizing and emergent.[1] These more contemporary definitions of life have shown up most explicitly in the philosophies of Gilles Deleuze, which work to develop more complex models that do not see the immaterial (language and force) and material (objects, humans, animals) as a grounding opposition. Languages such as statements, gestures, images, and songs are incorporeal but not immaterial. Incorporeal phenomena are real, actual, and material, but they are neither embodied in individual human or animal bodies nor an all-encompassing nature that can be set against culture. Songs, for example, are the actualization of the virtual potentials of specific assemblages – vocal chords, sound waves, molecules in the air, and the auditory capacities of various animals and humans. They have materiality in the molecular vibrations of the air, but not corporeality because they do not take up extension in space. Neither embodied in individuals nor a holistic nature, they can operate in conjunction with various parts and functions of both nature and culture.

From this perspective, I am interested in examining and extending Kennedy's vitalist turn through the works of Giorgio Agamben and Deleuze and Guattari, who take different approaches to the concept of animality and different redefinitions of life that impact our understanding of rhetoric and attempts to expand it beyond a human-centric position. Humanism privileges human thought and embodiment over other aspects of the world and builds rhetoric on models of representation and persuasion that uphold these distinctions. Antihumanism, in Agamben's formulation, privileges apparatuses that dominate humans and sees rhetoric largely as a corrupting force. Agamben defines bare life as the natural energy that fuels human apparatuses, ultimately defining apparatuses as machines created to capture and exploit that life, which leaves little room for rhetorical or political change outside of a return to individualistic humanism or a romantic elevation of nature. Posthumanism, as articulated in Deleuze and Guattari's notion of the refrain, privileges assemblages that are multiple, open, and always in the process of transformation. It acknowledges specific human capacities but importantly sees them as parts of specific assemblages and particular flows of life. This more emergent model that emphasizes reterritorializing specific assemblages avoids Agamben's more static and deterministic model by seeing rhetoric as material (both incorporeal and corporeal) emergences that open avenues for transformation and change.

The anthropological machine (humanism)

In his book *The Open*, Agamben examines the way that questions of animal life ground the elevation of the human, a general procedure he calls the "anthropological machine." The problem is not animal ethics or the value of

animals versus humans *per se*, but about the ontological status of living beings as such. Agamben provides a brief genealogy from Aristotle, through Bichat and Linneaus, up to Foucault on the ways defining life has produced the distinction between humans and animals, citing two general instances of it: ancient and modern, both of which are based on exclusion. The ancients produce the human through the humanization of the animal – the slave, barbarian, and the foreigner were all figures of the animal in human form that were categorically distinct from the fully human citizen. This ontological status allowed them to be exploited for labor or excluded from the city and its privilege. The moderns produce the human by animalizing the human – they identify the animal elements in humans such as NAZI depictions of the physical characterizations of Jews as animalistic or even American identifications of suspected terrorists as suspending human reason for animalistic behaviour. These characterizations categorize humans as forms of life outside of national or democratic norms and justify the suspension of their rights as citizens. For Agamben, both operate through a "zone of indifference" or "state of exception" that is neither animal life nor human life but "bare life" (38). In *Homo Sacer*, Agamben makes it clear how this state of exception allows these people to be treated as if they had no life beyond the bare minimum, which makes the atrocities perpetrated on them possible.

Agamben considers Heidegger as the last philosopher to put forward a version of the anthropological machine that divides the human and animal in order to produce the human. Heidegger is following the work of a number of thinkers in the first part of the last century who were investigating life but most importantly Jakob von Uexküll, who is considered the founder of ecology.[2] Uexküll supposes an infinite variety of worlds for each species of animal that are separate but linked together to produce a functional unity with an environment. Each animal type has a body with specific capacities for functional connections to its environment, or what Uexküll calls "carriers of significance" (Rüting 2004: 41, 46). Two of Uexküll's examples are the spider and the tick. The spider and the fly do not know each other, they do not "communicate" directly, but the spider's body builds a web perfectly to trap the fly – the spider web is constructed at a level of scale that the fly's eyes cannot detect and is constructed with the right amount of play and tension to keep the fly's body from escaping. They "communicate" by proxy through their interconnected bodily capacities and environmental conditions of possibility. Similarly the tick's body has the capacity to experience three primary carriers of significance: touch, odor, and temperature. Ticks are eyeless. They find their way to branches by the sensitivity of their skin to light. They have no ears, but can smell the butyric acid emitted by mammals. When they smell it, they drop off of their perch. If a tick manages to fall onto a mammal, it has an organ that perceives the mammal's precise temperature. In short, the tick is the relationships its carriers make possible (47) – bodily capacities plus ecology. Uexküll was investigating "the communicative unity of the organism and the world sensed by it" (Rüting 2004:

66), and can be read as articulating an ecology in which life communicates with itself. But he still maintained that humans are "able to 'make experiences' (Erfahrungen), to 'acquire' (erwerben) an umwelt and to 'understand' at least some aspects of their being-in-the-world" in ways that make humans distinct from other animals (Cheung 2006: 232).

Instead of turning Uexküll's analysis into a more open, ecological model of life, Agamben reads Heidegger as turning it into an anthropological machine that upholds a human/animal distinction. For Heidegger, life is a particular kind of being that is only accessible to humans. A stone is worldless; an animal only experiences the particular environment it has access to; humans are world forming (Agamben 2004: 50–1). Humans are not animals plus language or rationality. They are animals that recognize their animality: they are the beings that have the capacity to see beyond their limited environments and both imagine and produce their worlds. In Heideggerian terms, animals cannot see the as-structure – they can't see something as something *as* else (53). For Heidegger, animals are captivated by their own "carriers of significance" – they are trapped by their own body's limits for experience and relation. The spider cannot see the fly as a fly (or as a living being): its body is simply adapted to fill a functional space in its environment. This space between animality and its recognition as such is what Heidegger calls the Open. It is the space where possible futures beyond the limits of animal or bodily capacities can be seen that allows humans to see life as a larger world and strive toward those future possibilities.

This reading of Heidegger's elaboration of Uexküll continues to privilege the human, which limits rhetoric to human life and relegates it to a position outside of a functional ecology. Humans can see their limited environments via the critical distance that language provides. This division between humans and world places rhetoric outside of life and necessitates a model of representation – rhetoric becomes something that stands in for a particular human understanding of reality or becomes transparent to reality if the role of language is ignored.

Apparatuses (antihumanism)

Rather than take up a humanist reading of life from Uexküll's ecological model as Heidegger does, Agamben goes even further with Uexküll's notion of captivation, connecting it to his own definition of bare life. Agamben argues that humans too can fall prey to their own forms of captivation. For him,

> the anthropological machine of humanism is an ironic *apparatus* that verifies the absence of a nature proper to Homo, holding him suspended between a celestial and a terrestrial nature, between animal and human – and, thus, being always less and more than himself.
>
> (2004: 29)

In Uexküll's experiments with ticks, he was able to disconnect a tick from its environment and keep it alive for 18 years. Typically once a tick drinks the blood of a mammal it will fall off, lay its eggs, and die. Being suspended from its "carriers of significance" and cut off from its environment, it is neither animal nor human but in a state of suspension, without world (47) – just a living being, *bare life* (70). For Agamben, this is what Uexküll's ecology and Heidegger's humanism are not ready to confront and it is precisely the predominant nature of our posthistorical moment – contemporary institutions and technologies captivate human bodies and cut them off from their environments like the tick in Uexküll's experiment, making the last historical/first posthistorical task to manage this bare life on a model of Foucault's bio-power. The problem is not simply to undo the anthropological machine and its exclusions, but doing so in favor of bare life is antihuman and has become the predominant form of contemporary exploitation.

In "What is an Apparatus?" Agamben extends his analysis in *The Open* into the world of contemporary media apparatuses. In one of Foucault's interviews he defines an apparatus as the network of relations established among "discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral, and philanthropic propositions" in a particular historical moment (qtd. in Agamben 2009: 2). For Agamben, the posthistorical dissolution of the anthropological machine means that there is no inherently or distinctly human life, only living beings and the apparatuses that captivate them. With no pre-existing, unified human subject, apparatuses have to create a subject that corresponds to the functioning of their networks of relations and captures human bodies. Agamben sees almost no moment in which living beings are not oriented by these processes, extending management and control beyond the traditional prisons and schools to anything that has the capacity to "capture, orient, determine, intercept, model, control, or secure the gestures, behaviors, opinions, or discourses of living beings" (14). Any object, from cigarettes to fountain pens; any technology, from computers to cell phones; any practice, from agriculture to navigation; any discourse, from literature to technical documentation, carries with it an apparatus with a corresponding subjectivity. Posthistorical society fills the Open with these objects, technologies, and discourses all of which come to bear on the same body producing multiple subjectivities: "the user of cellular phones, the web surfer, the writer of stories, the tango aficionado, the anti-globalization activist, and so forth" (14–15). For Agamben, the specific purpose of the apparatus is to exploit the body's desire for happiness through the capture and subjectification of this energy or vitality – the becoming-tick of the posthistorical human in terms of Uexküll's experiment not just his articulation of functional ecologies in nature.

The production of subjectivity, however, simply covers over the complementary process of desubjectification. On one hand, subjectivity is not

wavering (as some humanists argue) but intensifying. On the other, Agamben argues that an apparatus also reduces living beings to bare life. This process does not dialectically produce a new subject (a worker, the bourgeoisie), which could be governable with traditional disciplinary apparatuses. Desubjectification actually increases the need for apparatuses of control over living beings rather than political discipline over subjects. The cell phone user does not acquire a new autonomous subjectivity but a number through which his body can be traced and monitored. The TV viewer does not become a subject of culture but simply a couch potato, or maybe a tally in the calculation of ratings (21). By accepting and even touting these media subjectivities, living beings are actually participating in their own captivation and exploitation. For Agamben, those who argue humans can use an apparatus toward their own ends are simply caught in the contemporary media apparatus that uses the production of subjectivity to cover over the control of bare life. Living beings cannot destroy the system, because in a very real sense it is systems all the way down. Even dropping out of the system, becoming even more docile, does not produce a revolutionary subject: either way living beings are still being reduced to bare life – "the incessant though aimless motion of [the] machine" (23).

Agamben's project is centered on redefining life as bare life to both make the particular contemporary problem of captivation and control show up and to propose the beginnings of a response to it. Bare life, paradoxically, is *both* the reduction of life for the purposes of exclusion (fascism) and exploitation (capitalism) *and* the ground of alternative lines of flight – means without end (both without conclusion and without purpose or use value). For Agamben, these profane excesses of life are outside of or beyond capture. In *Homo Sacer*, bare life is paradoxically both sacred and profane, which means a person could be killed without penalty (as with sacred sacrifices) but could not be sacrificed in a proper or sanctioned ritual (because bare life is ultimately profane and common). Profanation is a part of the problem – using bare life like any common, profane object leads to concentration camps. Similarly in "What is an Apparatus?" the dual role of subjectification and desubjectification, like the sacred and profane in *Homo Sacer*, creates the problem of captivation rather than concentration camps, holding bare life suspended between the celestial and terrestrial realms – a kind of suspension or detachment from the natural world. But in *The Open* and at the end of "What is an Apparatus?" profanation also provides a potential solution. As neither sacred nor profane, profanations can take someone out of this suspension (in human culture and media captivation) and return him or her to the profane, natural world. Agamben hints at this direction early in *The Open*, quoting Kojeve:

> If Man becomes an animal again, his arts, his loves, and his play must also become purely "natural" again. Hence it would have to be admitted that after the end of History, men would construct their edifices and

> works of art as birds build their nests, and spiders their webs, would perform musical concerts after the fashion of frogs and cicadas, would play as young animals play, and would indulge in love like adult beasts. (Qtd. in Agamben 2004: 9)

If religious sacrifices take everyday objects and elevate them into sacred objects, profanations are the "counter-apparatuses" that return them to the free or common (2009: 17–19). Agamben is preserving a form of Bataille's "negation without use" that survives the end of history.[3] This remains in an epilogue to history via "eroticism, laughter, and joy in the face of death" (Agamben 2004: 7). In privileging nature against technology, Agamben is arguing that media apparatuses cut humans off from the natural environment like the tick in Uexküll's experiment, so profanations would bring us back to a natural, common use.

However, it is not clear that this return to nature is a return of Uexküll's tick-as-captivation to tick-as-ecology. By emphasizing the antihuman aspects of contemporary life, Agamben continues the human/animal and culture/nature distinctions that are part of the problem with the anthropological machine and continues to privilege the embodied human individual rather than ecological transformations. One of Calarco's critiques of Agamben is that the animal remains his blind spot. When speaking of bare life, he is still essentially speaking of human life caught up in the definitions created by the anthropological machine. He is not concerned with animals or ecologies, but with the exploitation and freedom of humans. In placing culture and technology as the dominating apparatus, Agamben has no place to go with his response but a romantic version of nature and individual freedom. And his reading of bare life beyond control as a form of profanation remains anarchic and individual, leaving the apparatus unchanged. Given his logic, the more work the apparatus does to turn humans into bare life, the more elusive bare life becomes (2009: 23). Agamben wants profanations to extend this elusive nature of bare life as abandonment, as a line of flight from its captivation. However, it's not clear how these profanations might be collective and communicative, and thus how they might enact change within or among apparatuses rather than just flights from them – put simply, it is not clear how Agamben's turn to nature in opposition to the captivation of contemporary culture would constitute a return of the tick to its ecological and relational being rather than just a free, autonomous individual, embodied life. The human is either captivated by culture and community or naturalized and individual.

Ultimately, Agamben's antihumanist position either makes language a manipulative force within media apparatuses, or increases the distance of language from the system, leaving rhetoric to retreat into an outside. Rhetoric, as a part of media, culture, and institutional discourse functions as a part of the captivating apparatus through advertising, propaganda, entertainment, and even technical documentation. The retreat of

profanations into nature is a turn away from language, communication, and the social. Language as immaterial culture is opposed to materiality and nature.

The refrain (posthumanism)

I turn to Deleuze and Guattari because they give a more collective and materialist response that accounts for change and ultimately opens a place for rhetoric – they give us assemblages rather than apparatuses and the refrain instead of bare life. These perspectives would not see the tick-as-captivation or nature in opposition to culture. Instead they provide a way of thinking about tick-as-ecology that could include rhetoric as incorporeal, material aspects of any assemblage. Rather than perpetual constraint, they see transitional possibility; rather than romantic individual transgression, they see collective assemblages; rather than a flight from apparatuses, they see lines of flight toward future assemblages; rather than the open as human recognition, they see the open as material transformation; rather than dismiss the animal in favor of human concerns, they develop the beginnings of a "bestiary" through their many appeals to animal life (Genosko 1997). Life is open not bare.

The most important example for rethinking animality, materiality, and rhetoric is their discussion of Bower Birds such as the brown stagemaker in relation to the movements of territorialization and deterritorialization in *A Thousand Plateaus* (1987: 311–25). For Deleuze and Guattari, assemblages are part of a constant process beyond a more deterministic notion of system or apparatus with three particular kinds of movement:

1 one that demarcates an assemblage in relation to the chaotic world around it;
2 one that organizes the internal assemblage once it is distinguished from its milieu;
3 one that opens the assemblage back to the outside world in order to make new connections with it (1987: 311–12).

Rather than linear moments in a chain, however, "they are three aspects of a single thing, the Refrain" (312). A refrain is any recurring pattern of sounds, positions, actions, or qualities that simultaneously marks a territorial center from its outside, internally organizes the assemblage, and opens it to other functions and assemblages. A monk's chant, for example, separates his space for meditation from the outside world; organizes his thoughts and regulates his body's position, heart rate, blood pressure; and connects him to another plane of thought or existence (meditation is a different mode of existence than running a marathon or cleaning house).

Importantly, these refrains are not restricted to the human world. Each morning the brown stagemaker (a bird native to Queensland, Australia)

drops leaves from its tree and then turns them upside down around the tree so the lighter sides contrast with the ground and establishes his territory as distinct from the territories of other brown stagemakers and as a territory for his own activities (feeding, courting, and nesting) (315). Such a territory not only keeps the forces of chaos at bay by creating distance between two beings of the same species, but it also opens spaces for other species to fill ecological niches at other levels of scale around the tree, opening the space to other assemblages (319–20). Birds can also assemble a variety of these refrains into a "full song." The wren family, for example, assembles a whole set of territorialized functions:

> [T]he male takes possession of his territory and produces a "music box refrain" as a warning to possible intruders; he builds his own nests in his territory, sometimes as many as a dozen; when a female arrives, he sits in front of a nest, invites her to visit, hangs his wings, and lowers the intensity of his song, reduced to a mere trill.
>
> (323)

This collection of refrains not only performs a "nesting function" that establishes the male's territory in distinction from other males but it also performs a "courtship function" that opens the territory to various females through changing the song's intensity. These kinds of intra-assemblages hold together materials, colors, sounds, odors, and postures, while simultaneously opening the assemblage to other configurations.

These refrains also provide the mechanism for change, transition, or transformation among assemblages. A single refrain from one assemblage can perform another function in a different assemblage, providing a passage to a new assemblage. For example,

> when the male does not make the nest and confines himself to transporting materials or mimicking the construction of a nest (as in Australian grass finches), he either courts the female holding a piece of stubble in his beak (genus *Bathilda*), uses the grass stem only in the initial stages of courtship or even beforehand (genera *Aidemosyne* and *Lonchura*), or pecks at the grass without offering it (genus *Emblema*).
>
> (324)

In its transition among these different practices and subspecies, the "grass stem" is not simply a leftover of nesting behavior. The grass stem is an element of passage from the territorial assemblage to the courtship assemblage and is expressed differently in each case. It becomes what Deleuze and Guattari call an "assemblage converter" that functions as a structural component in territorialization and as a gestural component in courtship, opening a space for the male's song to take on a stronger territorial role and producing two distinct assemblages (325). The grass stem is not an isolated

object but a fulcrum that participates in multiple assemblages or alliances – the stem, the beak, the song, the flapping of wings, the nest, the tree, the female, other males, and more. In courtship assemblages the stem functions incorporeally as gesture, in nesting it functions corporeally as a structural component of nesting. These performances, assemblages, and movements are not rituals in the traditional, human sense of profanations in Agamben, but rhythms within the material, in/corporeal flow and evolution of situations, species, and milieus – life (Bogue 1991).

If Kennedy's understanding of rhetoric is still humanist, and Agamben's is ultimately antihumanist, then I would characterize Deleuze and Guattari's as posthumanist – recognizing the specific capacities of humans as they would any animals, but always within the context of specific assemblages and processes of re/territorialization. Rather than tick-as-captivation, the refrain would see tick-as-ecology as an alternative form of the open – possibilities for change are there precisely because the environments are open, accessible, changing, and language is something that circulates through these ecologies, not something else controlled by or controlling humans. This would put rhetoric in a materialist flow that acknowledges both corporeal and incorporeal aspects and functions of rhetoric's role in emergence – the way song, color, and gesture are as vital to transformation as any corporeal possibility and constraint. Thinking in terms of the refrain, rhetoric would be a fundamental capacity for such relations that functions as relays for enacting rhythms and performing emergences. Such rhetorics of (non)communication operate in the movements and relations of bacteria, the swarms and flows of bees and ants, the birds' transitions among territorial and courtship assemblages, and the movements of people through Chicago's Millennium Park. If ceaselessly redefining life goes hand in hand with rhetoric and politics, I would redefine life not as animal, human, or bare, but emergent – the complex production and circulation of in/corporeal assemblages through which refrains emerge and life communicates with itself.

Notes

1 For more on the vitalism-mechanism debates in the early twentieth century and definitions of vitalism see Arthur Lovejoy's series of exchanges in the journal *Science*. For more on vitalism and the discipline of rhetoric and composition see my *A Counter-History of Composition*. The continued debates over vitalism in these various times, places, and disciplines are all caught up in the definition of life that Agamben sees as a central concern for contemporary thought.

2 Uexküll wrote extensively in the early- to mid-twentieth century, roughly the time of Bergson's engagement with vitalism and phenomenology and Lovejoy's debates over the meaning of vitalism within the scientific community. For a nice introduction to Uexküll see Torsten Rüting, "History and significance of Jakob von Uexküll and of his institute in Hamburg." Rüting notes that Uexküll was often misunderstood in his time and labeled a vitalist, in the negative, romantic mystic sense. Even though he was dedicated to developing a proper experimental and epistemological basis for biology, he was critical of positivistic science, which

drew him into the mechanism–vitalism debates of the day. His influence today extends through theories of ecology and the environmental sciences up through the philosophies of Ernst Cassirer and Martin Heidegger to Ludwig von Bertalanffy's development of systems theory.

3 Calarco also reads Agamben as following Benjamin's concepts of the "saved night" and "dialectic at a standstill" as articulations of the natural world in itself, beyond a place for humans to play out their own history (Calarco 2008: 100).

References

Agamben, G. (1998) *Homo sacer: Sovereign power and bare life*. Stanford, CA: Stanford UP.

Agamben, G. (2004) *The open: Man and animal*. Stanford, CA: Stanford UP.

Agamben, G. (2009) *What is an apparatus? and other essays*. Stanford, CA: Stanford UP.

Bogue, R. (1991) "Rhizomusicosmology," *SubStance*, 66: 85–101.

Calarco, M. (2008) *Zoographies: The question of the animal from Heidegger to Derrida*. New York: Columbia University Press.

Cheung, T. (2006) "Cobweb stories: Jakob von Uexküll and the stone of Werder," *Place and Location: Studies in environmental aesthetics and semiotics*, 5: 231–53.

Deleuze, G., and Guattari, F. (1987) *A thousand plateaus: Capitalism and schizophrenia*. Minneapolis, MN: University of Minnesota Press.

Genosko, G. (1997) "A bestiary of territoriality and expression: Poster fish, bower birds, and spiny lobsters," *Canadian review of comparative literature*, 24(3): 529–42.

Hawk, B. (2007) *A counter-history of composition: Towards methodologies of complexity*. Pittsburgh, PA: University of Pittsburgh Press.

Kennedy, G. (1988) "Some reflections on neomodernism," *Rhetoric Review*, 6(2): 230–33.

Kennedy, G. (1998) *Comparative rhetoric: An historical and cross-cultural introduction*. New York: Oxford University Press.

Lovejoy, A. (1911a) "The meaning of vitalism," *Science*, 33(851): 610–14.

Lovejoy, A. (1911b) "The import of vitalism," *Science*, 34(864): 75–80.

Lovejoy, A. (1912) "The meaning of Driesch and the meaning of vitalism," *Science*, 36(933): 672–75.

Rüting, T. (2004) "History and significance of Jakob von Uexküll and of his institute in Hamburg," *Sign Systems Studies*, 32(1/2): 35–72.

Young, R. (1976) "Invention: A topographical survey," in G. Tate (ed.) *Teaching composition: Ten Bibliographic Essays*. Fort Worth, TX: Texas Christian UP.

Young, R. (1978) "Paradigms and problems: Needed research in rhetorical invention," in C. Cooper and L. Odell (eds.) *Research and composing: Points of departure*. Urbana, IL: NCTE.

Chapter 14

8 Mile

Networked decision making

Jeff Rice

In a performative theorization of material rhetoric, the resolution of some problem or issue may not be needed. Instead, one can explore a space as a series of associations and meanings that, when networked, demonstrate some concept. To perform one aspect of a rhetoric of the network, for instance, I can allow such a performance to reveal what I have yet to learn. In that sense, I can write against a tradition of network scholarship (Manuel Castells, Eugene Thacker, Manuel DeLanda) devoted to exploring the social, economic, and political aspects of networks by decoding or breaking down problematic practices and representations for the purposes of producing a better state of being. Following a performative tradition of rhetorical theory aligned with Gregory Ulmer, Bruno Latour, and Marshall McLuhan, I work against contemporary theorists by performing a theory of networked rhetoric without a promise of something better. Rather, I propose an exploration of a material space, 8 Mile Road in Detroit, Michigan, within a larger network, Detroit, so that I might theorize one feature of a rhetoric of the network, decision making.

8 Mile, the best-known Detroit road because of the Eminem film of the same name, showcases the decision to leave the city in the film and album's song "8 Mile." In that song, Eminem promises that once he is past the 8 Mile tracks, he will be gone and never look back. 8 Mile's fame also comes from the racial mythology that African-Americans have decided to live on the south side of 8 Mile; whites have decided to live on the north side. This mythology argues that because of the 1967 riots, whites decided to leave one side for the other. Paul Clemens highlights this myth in his memoir of growing up white on the south side of 8 Mile,

> Like 7 mile and 6 Mile, 8 Mile was so named after its distance from the city center, and referencing these streets as they stood in relation to one's own home was a shorthand way of making clear just how deep into the heart of darkness one still lived.
>
> (2005, 53)

Regardless of the truth of such claims or the ways neighborhoods have remained mixed on both sides of 8 Mile for quite some time, 8 Mile is about making a decision. 8 mile provides an understanding for how the material – the physical space – offers a rhetoric of decision making within networked culture.

8 Mile, also known as M-102, marks eight miles from downtown Detroit to the road itself (other roads, too, bear similar numbers depending on their distance: 7 Mile, 10 Mile, etc.). Communities such as Eastpointe, Royal Oak, Ferndale, Hazel Park, Warren, and Southfield, share the road's boundaries. 8 Mile is a pivotal point within the Mile Road System, Southeastern Michigan's navigation scheme for east-west roads. 8 Mile serves as a navigational device; its position as a middle point of the Metro area allows residents and visitors to ask which side of the city/suburbs divide they are located. 8 Mile is also a moment of calculation, for it is often used to determine distances and travel times from the center of the city to a given east-west locale. To travel from the New Center to Ferndale requires consideration of traffic leading up to 8 Mile. To travel from Ferndale to Southfield requires a navigation of 8 Mile's east-west lanes. Such maneuvers are common.

Early surveyors established the mile based distance as a numerical point between two areas within a space. The "best" way to figure that calculation, they decided, was a numerical equation (rather than a common or proper name). Popular culture transfers the spatial calculation to a general audience by emphasizing decision making. In the song "Places to Go," rapper 50 Cent identifies 8 Mile as the intersection of a decision: to live a "normal life" or live the life of a gang banger. In the end, he opts to live the dangerous life, staying on the road, fleeing from place to place in order to avoid the police. 8 Mile is one place, he sings, that he might be found visiting while on the run.

For 50 Cent, 8 Mile is an imaginary hiding place. For those who sustain a rhetoric of the city's improvement (as opposed to a 50 Cent styled escape), 8 Mile serves economic, imaginary decisions. At that intersection, various imaginary projects wait the decision to materialize. The long proposed Shoppes at Gateway promises 330,000 square feet of retail and commercial development at 8 Mile and Woodward.[1] J.C. Penny, Marshalls, restaurants, and the generic promise of "Big Box Stores" have circulated in newspapers, news reports, and business updates as part of this imaginary.[2] The Eight Mile Boulevard Association boasts potential projects, including the Shoppes proposal. Its "Rethinking 8 Mile: A Framework for Unifying Elements" imagines 8 Mile as a "series of hubs of community social activity" that unite businesses along the 8 Mile and Woodward corridor (2). Among its several goals, one is to "open communities to new possibilities by changing the 'mind' about the potential of the corridor" (2). Given the road's tumultuous image within public discourse, convincing the population to think differently about 8 Mile, or even to make new decisions regarding when and if to visit the road might prove difficult.

8 Mile is home to strip joints, after hours clubs, and XXX video stores, various retail and entertainment locations, and the bar where rap singer

Proof was murdered. It often attracts hyperbolic meanings centered around the types of businesses it hosts as well as the boundaries it supposedly protects. Despite the variety of business along the road, storefront names like "Hot Tamales Rocks Topless," "Booby Trap," "Cheetah," and "Trumps Gentleman Club" generate the image of 8 Mile as the decision to embrace depravity and moral collapse. In his 1974 inaugural Mayoral speech, Coleman Young tapped into that image in order to situate his administration as distinct from such behavior. Young advised "criminals" to "hit 8 Mile Road," and added to that hyperbole by casting the city's white residents as "wrong doers" whose only choice was to relocate so that black residents could restore order. The decision had been cast, Young suggested, and Detroit south of 8 Mile was now going to be all black.

Amid this historical narrative, there is a thread of reception, how audiences, agents, and other forces decide to use information at their disposal, how they "do" or "make" a space, how they decide upon a meaning. In the 1957 essay "Speed of Cultural Change," Marshall McLuhan calls the electronic revolution a "Do it yourself movement." Part of the do it yourself movement, McLuhan argues, involves the ways information is organized by already established "editors," but also by the so-called noneditors, those participants in digital culture who receive information so quickly, and so much at once, that they have no choice but to become "editors" as well (i.e., they cannot wait for information to be organized for them). The noneditors, as McLuhan calls them, represent a control shift from distributed information to those who participate in its distribution and not just its reception. In other words, audiences (as opposed to only producers) decide how to receive, alter, and respond to information. This sentiment is popularized more recently by media theorists such as Axel Bruns (prosumers) and Henry Jenkins (fan participation) who stress how decisions regarding information organization conflate the roles of users and producers.

Paul Virilio, on the other hand, translates McLuhan as a warning that the decision to conflate information results in power shifts; one side can suppress the decision making of a weaker, less informed side. Virilio writes that "the reduction of distances has become a strategic reality bearing incalculable economic and political consequences, since it corresponds to the negation of space" (*Speed and Politics* 1986, 133). While I understand the political ramifications of information conflation (via suggestion, concealment, generalization, or other means), I am unwilling to yield to Virilio's "incalculable" because I already notice a sense of calculation at play when distances are reduced. I see that calculation in the early decision to navigate Detroit's east-west divide as a calculation of simple counting, or in popular culture references to decision making, or in a mayor's decision to cast out a part of the population. All information affects the concerns of all other information when space is reduced, but in that reduction, decisions regarding information connection or disconnection are made. "The movement of information," McLuhan writes, "is instantaneous and there is no mechanism

that can do this. It is this astonishing new dimension of the instantaneous that has transformed our human interrelationships into a pattern of conspicuous coexistence" ("Speed" 18). The instantaneous formation of relationships McLuhan highlights indicates the network drawing together concerns with other concerns. It is the space where boundaries break down. It is the space where connections may occur so quickly that the most unlikely of objects join and disconnect in unexpected ways as agents decide how to place or situate them. It is the basis of this performance of material rhetoric and networks.

Do it yourself culture

The introduction to the film *8 Mile*, a montage of scenes of Detroit (the Ambassador Bridge, downtown, storefronts, the sign 8 Mile) suggests that the only way to introduce the city to an audience is through the conflation of sped up moments, fragments of urban life, and networked-styled interfaces of movement. Watching this intro, the viewer decides which fragment, in juxtaposition with another fragment, represents the city. The introduction, then, follows McLuhan's notion of do it yourself as a decision making, new media moment.

"We have," McLuhan notes, "become irrevocably involved with, and responsible for, each other" (*Medium* 24). One might speculate that moments of involvement involve various modes of decision making regarding the boundaries or borderlines that differentiate between activity and nonactivity. Partly, decisions about one's place in a given space can keep one on both sides of the boundary in any given moment, whether in a filmic or city space. The decision to reside on one side of 8 Mile or the other, for instance, may not be relevant within a given network. For one reason, speed allows both sides to be accessed at once. The speed of decision making affects the way one navigates informational boundaries by presenting both sides as, in fact, one interlinking side, as *8 Mile's* montage does. Therefore, unlike most network scholarship claims, network decisions do not always result in moving from a good area to a bad one, or vice versa.

A popular culture example might help with this point. By the end of the movie *8 Mile*, a decision made by the main character Rabbit leaves the narrative open-ended. Rabbit has won a rap off in a club. Film and space interact earlier in *8 Mile* when a pivotal scene takes place in the former Michigan Theater, which is now a parking garage.[3] The suggestion that the car and entertainment are colliding in the age of new media is obvious by this framing, but even more so, the decision making of that scene – to fight or not to fight as two opposing street groups come into contact – is an important moment that carries over into the film's finale where audiences experience the denouement of Rabbit's driven ambition. Both scenes anchor a decision. At the film's conclusion, when Rabbit wins the decisive rap battle the

narrative has led up to and the literal fight in a parking garage becomes a lyrical fight in a club, he is left with the option to further his musical potential or return to the stamping factory where he ekes out a living. The result of that decision is not resolved. The viewer must "do it herself" and figure out which option the brooding Rabbit, who sneaks back into the city's darkness when the battle is over, chooses. Has Rabbit reconciled himself with a blue collar existence? Will he now be a star? Is any decision made? Audiences form the associations in order to complete the narrative and thus contribute to the overall network of meaning the film's diegesis promotes.

Rabbit's nondecision is indicative of Herbert Simon's interests in decision making within information organization, or what Simon calls "the pay off" of a decision. In 1957, Simon's *Models of Man* explores the complexity of decision making regarding "rational and non-rational aspects of human behavior" (Simon 1). Simon focuses on the pay off accompanying every decision. Within every decision, an individual "must be able to attach definite payoffs (or at least a definite range of payoffs) to each possible outcome" (Simon 245). Simon introduces one example of the payoff by the "case of the individual, he may be trying to implement a number of values that do not have a common denominator – e.g., he compares two jobs in terms of salary, climate, pleasantness of work, prestige, etc." (251). While it may seem likely that a payoff (comparison of values) will communicate the decision-making process for the individual, Simon argues that the complexity of payoff judgments reveal that "the actual process is quite different from the ones the rules describe" (Simon 246). We might interpret Simon's work on decision making and information organization to suggest that no one moment rhetorically deconstructs the range of possibilities available regardless of how rationally these possibilities are juxtaposed. Any number of values do not have a common denominator because any number of values are themselves part of larger systems. Nigel Thrift calls this state qualculation, "an activity arising out of the construction of new generative microworlds which allow many millions of calculations to continually be made in the background of any encounter" (2008, 90). One characteristic of qualculation, Thrift argues, is "a sense of continual access to information arising out of connectivity being embedded in all manner of objects" (99). The city and the club where the rap battle occurs circulate information that Rabbit must choose from. Even more so, 8 Mile, the road from which the movie takes its name, interjects more objects of information and associations into the network than the film's diegesis does: the various topless bars patronized by rappers,[4] the abandoned storefronts along 8 Mile, the road's cultural meanings, the road's racial meanings captured by the film's throwaway line for Rabbit: Get on back to 8 Mile. Each object passes on information (within and outside of the diegesis) to Rabbit that affects his decision making. Each object contains a variety of qualculation moments. The system, in fact, is too big for one decision to be made within it.

In the case of *8 Mile*, the payoff for Rabbit may be evident in the film's diegesis (Rabbit will be a rap star), but by its conclusion the payoff is not as clear as common denominators – work in music or work in the factory – are placed side by side. While these may be similar in certain circumstances, they may not hold a common denominator for Rabbit. Work and music. Detroit and popular culture. The city and rap. One influences the other. Working with one may lead to success in the other. Or it may not. Decision making is not a simple process. The qualculation in this given moment is a complex array of other moments. "The behaving organism does *no*t in general know these costs, nor does it have a set of weights for comparing the components of a multiple pay-off" (Simon 254). These categories comprise the systems of thought one draws upon within a network in order to organize and arrange material for some sort of result (predicted or not). Simon calls this type of organization "bounded rationality." Bounded rationality, Simon argues, is a social concern. It is based on humans' limitations and "ability to agree on goals, to communicate, and to cooperate that organizing becomes for them a 'problem'" (199). Bounded rationality, within the rhetoric of the network, highlights "the limits of humans as mechanisms for computation and choice" (200). Given McLuhan's concerns with speed and culture, then, it is no wonder, as a resident of twenty-first century Detroit, that Rabbit's decision making faces limits when overloaded with information. "It is only because organized groups of human beings are limited in ability to agree on goals, to communicate, and to cooperate that organizing becomes for them a 'problem'" (Simon 199). Because of its focus on limitation, bounded rationality is not, therefore, rationality. All Rabbit can do as he organizes the best way to negotiate the borders of music and labor is make a bounded "rational" choice. Simon calls this process satisficing. "The key to the simplification of the choice process in both cases is the replacement of the goal of maximizing with the goal of satisficing, of finding a course of action that is 'good enough'" (205). Even after a cathartic victory, walking away into the night seems good enough for Rabbit.

8 Mile, then, teaches the networked rhetoric of "good enough" decision making. Good enough moments appear when various elements networked within a decision are not common nor do they necessarily point to rational outcomes. Their juxtaposition or association for a pay off results not in a value of one or the other but instead the "good enough" moment. The moment when Rabbit cannot decide on the maximized option of financial success, but settles on the good enough option of the status quo (no final decision) is the network moment of good enough. Good enough may feel like an odd trait of networked rhetoric or even a contradiction given the hype often attributed to new media and networks. Good enough's importance, however, results from the complexity of network borderlines, fuzzy areas of connectivity that are not clearly demarcated (such as which side of a road a specific ethnic group lives on or why I include one idea or theory in this chapter to discuss 8 Mile). Because of the limitations that exist when

navigating these types of social spaces, networks rely on good enough moments of decision making in order to avoid what Bruno Latour calls "the myth of progress" (*Pandora's Hope* 199). The role of good enough, therefore, is not to frame organization in the network as a "better" or "more advanced" state. I extend the good enough gesture satisficing introduces into a networked rhetoric in order to avoid a call for something better, more productive, or final. I want to avoid the myth of progress popular in many writings on networks, new media, and technology. William Mitchell (1997), whose work informs much of my thinking on the city, technology, and Detroit, for instance, concludes *City of Bits* by claiming

> Networks at these different levels will all have to link up somehow; the body net will be connected to the building net, the building net to the community net, and the community net to the global net. From gesture sensors worn on our bodies to the worldwide infrastructure of communications satellites and long-distance fiber, the elements of the bitsphere will finally come together to form one densely interwoven system within which the knee bone is connected to the I-bahn.
>
> (172–173)

In this prediction of the computerized future, Mitchell does not turn to the good enough dimension of networks. His framing of new media is that network culture will inevitably become a "good." Value based decisions regarding network thinking prevent spaces from demonstrating ideas outside of what is already circulated (i.e., networks impoverish; networks liberate). My exploration of one of Detroit's spaces, therefore, is not a return to calls of rejuvenation and rehabilitation often raised in discussions of technology, the material, or the urban. The crossing of boundaries networks support promises none of these moments that tend to follow a rational decision, such as improving a street, remodeling a neighborhood, investing capital, or diversifying neighborhoods. Instead, network borders are crossed with satisficing motives. The narratives or theories we produce about networked places (such as 8 Mile), therefore, do not need to promote a theory of progress or "being better." They can support the logic of "good enough."

Diegetic spaces: the good enough diegesis

Rather than interpret a rhetoric of the good enough, I want to continue to perform it through a narrative other than the 8 Mile filmic narrative I have described. In order to outline the rhetoric of good enough, I have focused on 8 Mile, a road in Detroit. But in 1980, as a 10-year-old in a Miami suburb far from Detroit, I read *Creem* magazine. *Creem*, a major rock magazine in Detroit, published writings by, among others, Lester Bangs and Dave Marsh. In honor of the magazine's biweekly contributions to my growing

knowledge of rock and roll, I would rip pages from each issue and post them all over my walls. In that sense, I created a filing system outside of the confines of the bounded publication. On the walls of my room, I opted to generate my own information system for no reason other than it felt good enough. Keith Richards was placed above one window; Gene Simmons below another; Ted Nugent next to another. I chose to organize information with the imaginary narratives supported by magazines; that is, I used popular culture to understand the world around me. In "A Quick Trip Through My Adolescence," *Creem* writer Lester Bangs (2003) remembers his childhood similarly. In a discussion with a college professor, Bangs asks his teacher how, given the demands of teaching, he could keep up with his own work, the news, and the latest magazines. After noting how he divides time for the first two items, the professor responds "And magazines and all that sort of thing … do you *read* magazines?" (20) Bangs responds in the affirmative, noting the role popular magazines played in helping him decide to become a journalist, not a professor. Nothing, then, was more satisficing to Bangs than the everyday: *Life, Beat* magazine, comic books, other daily items.

For me, a kid in suburban Miami, nothing was more satisficing than the everyday events, moments, and interests of popular music. Little did I know at the time that Boy Howdy, the *Creem* logo and focal point of my interests, was a Detroit icon. While its locale was Detroit, *Creem* was not published on 8 Mile. Instead, it was published in a small loft on Cass Avenue, the avenue that runs through Wayne State University, where I was once on faculty. I often mapped my route to Wayne State from Ferndale (where I lived) by crossing 8 Mile. At Wayne State, I worked in an office just on the outskirts of Cass Avenue (I taught in a building on Cass). This networked connection of associations is fuzzy at best. Its fuzziness, however, offers me an insight regarding networks and decision making because satisficing is never a clear outcome of networked thought. One difficulty I have experienced writing about how 8 Mile associations teach me a rhetoric of the network is that the hundred or so copies of *Creem* I owned as a kid have long been thrown out. While mentioning that my former employment and *Creem* once occupied the same street does not feel like a good enough connection between 8 Mile and *Creem*, I insist on believing that the connection between these two spaces of discussion can be found in one or more of those trashed magazines forever lost to me. In my own mapping scheme, I imagine *Creem* as a space on the route to Detroit and Wayne State. Even though I no longer have the magazines to prove to me so, *Creem* is a part of my metaphoric database whether or not its position is obvious or clear in relationship to other items in my overall database. Including *Creem*, therefore, leaves me with a rhetorical decision regarding organization: how to include what is missing?

In the network, this dilemma problematizes where items connect or belong in a given space, particularly when the goal of connection is not necessarily a progressive state (like proving that causality or representation

exist). David Kolb notes that in networks, "One effect is a growth of social settings and actions divorced from any geographical place" (2008, 13). Kai Eriksson writes that this divorce of action and place results from how borders and boundaries shift within networks. "The boundaries are calculated according to the network's functioning" (2005, 311). Eriksson elaborates:

> Therefore, it is thinking of a relation without an interior, or communication without a centre, that seems to constitute a key to the ontological field that the network has occupied in the era of vanishing unambiguous borderlines.
>
> (313)

When *Creem* left Detroit, it settled in Birmingham, far beyond the 8 Mile border. If the magazine made a decision that was "good enough" it was probably the one to move from the heart of Detroit, Cass near Wayne State, to Birmingham, an expensive and suburban area at least four miles to the north of 8 Mile. The decision, it would seem, left a type of empty interior to the magazine's claim to be from Detroit. I understand *Creem's* decision to be like the one Rabbit makes at *8 Mile's* conclusion. Which side of 8 Mile to live on is like asking whether or not one wants to be a star or to go back to the factory (as Rabbit asks). It is to choose between connecting with actual rhetorical agents (as I ask about *Creem*) or with the idea of an agent (as with my memory of *Creem*). Even *Creem* itself could not decide on whether to write from Detroit (Cass) or the suburbs beyond 8 Mile (Birmingham). Even still, *Creem* framed its own narrative as being the magazine in Detroit. It decided to create its own diegesis. It formed, what Victor Vitanza (1987) has called, a curative fiction.

Gregory Ulmer writes that "A diegesis involves time as well as space and my plan is to represent not just a place but an event" (*Heuretics* 1994, 100). Ulmer frames the diegesis as a digital rhetoric that is network based. "The 'field' or network I must construct, within which an invention, or the premises of inventive thinking, might appear has all the qualities of a diegesis in a film" (*Heuretics* 98). The digital diegesis appropriates imaginative rhetorics from film (logics of layering and association) for purposes of invention. This thinking, then, is an imaginative creation of an event, and not, as Castells writes, the uncovering of how "power relationships are specific to each network" one might encounter (2009, 50). The event I imagine here is the lost *Creem* magazine dedicated to 8 Mile. "Given equal competence (no longer in the acquisition of knowledge, but in its production)," Lyotard writes, "what extra performativity depends on in the final analysis is 'imagination,' which allows one either to make a new move or change the rules of the game" (1997, 52). The reason to produce a rhetorical space out of a material space like 8 Mile is not to recite nor repeat the narrative of Detroit (whose power relationships we already know), but to perform Detroit as a network, to imagine the city as a network, to change the rules

of the game regarding how we write about urban spaces like Detroit, to invent a networked rhetoric whose features might include – among other things – the not yet known role of decision making, to work with what Latour calls a "capability" rather than a permanence. Satisficing involves agents producing capability rather than actuality. Satisficing involves exploring networked capabilities to discover what they might produce, rather than what they have produced. In the moment of capability, there is room for further options to be weighed, included, or excluded (and this is how I read Rabbit walking away; he performs the capable; the audience imagines what will be). There is room for imagination in the database structure of networks. Networked decision making, therefore, is not the state of acquiring a better state, but rather the rhetorical move to imagine spaces within the network as "good enough," as events or moments that may themselves serve as the agents for further work, such as a lost pile of *Creem* magazines or a road somewhere in Detroit, Michigan.

Notes

1 See http://www.crainsdetroit.com/article/20070713/SUB/70713072/-1 and http://www.modeldmedia.com/inthenews/gateway9607.aspx
2 See http://www.detnews.com/apps/pbcs.dll/article?AID=/20071006/BIZ/710060367
3 See *Time* magazine's pictorial "The Remains of Detroit" for a photograph of the theater turned into a parking garage: http://www.time.com/time/photogallery/0,29307,1864272_1810106,00.html
4 For an example, we might consider Proof, Eminem's acquaintance, and his murder at the CCCC topless club on 8 Mile in 2006.

References

Bangs, Lester. *Mainlines, Blood Feasts, Bad Taste: A Lester Bangs Reader*. New York: Knopf Publishing Group, 2003.
Castells, Manuel. *Communication Power*. Oxford: Oxford University Press, 2009.
Clemens, Paul. *Made in Detroit: A South of 8 Mile Memoir*. New York: Anchor Books, 2005.
Eminem. *8 Mile: Music from and Inspired by the Motion Picture*. Santa Monica, CA; New York, NY: Shady/Interscope, 2002.
Kai, Eriksson. "The Ontology of Networks." *Communication and Critical/Cultural Studies*. Vol. 2, No. 4, December 2005 (305–323).
Kolb, David. *Sprawling Places*. Athens, GA: University of Georgia Press, 2008.
Latour, Bruno. *Pandora's Hope: Essays on the Reality of Science Studies*. Cambridge, MA: Harvard University Press,1992.
Latour, Bruno. *Reassembling the Social: An Introduction to Actor-Network-Theory*. New York: Oxford University Press, 2005.
Liu, Alan. *The Laws of Cool*. Chicago, IL: University of Chicago Press, 2004.
Lyotard, Jean-François. *The Postmodern Condition: A Report on Knowledge*. Trans. Geoff Bennington and Brian Massumi. Minneapolis, MN: University of Minnesota Press, 1997.
McLuhan, Marshall. "Speed of Cultural Change." *College Composition and Communication*. Vol. 9, No. 1, 1958 (16–20).

McLuhan, Marshall and Quentin Fiore. *The Medium is the Massage: An Inventory of Effects*. Corte Madera, CA: Gingko Press, 2001.
Mitchell, William J. *City of Bits: Space, Place, and the Infobahn*. Cambridge, MA: The MIT Press, 1997.
"Rethinking 8 Mile: A Framework for Unifying Elements." Archive DS. Archive Design Studio, 2005.
Simon, Herbert. *Models of Man: Social and Rational; Mathematical Essays on Rational Human Behavior in Society Settings*. New York: Wiley, 1957.
Thrift, Nigel. *Non-Representational Theory: Space, Politics, Affect*. London: Routledge, 2008.
Ulmer, Gregory. *Heuretics: The Logic of Invention*. Baltimore, MD: The Johns Hopkins University Press, 1994.
Virilio, Paul. *Speed and Politics: An Essay on Dromology*. New York: Semiotext(e), 1986.
Vitanza, Victor. "Critical Sub/Versions of the History of Philosophical Rhetoric." *Rhetoric Review*. Vol. 6 No. 1, 1987 (41–66).
Young, Coleman. *Hard Stuff: The Autobiography of Coleman Young*. New York: Penguin, 1994.

Chapter 15

Lessons from the YMCA

The material rhetoric of criticism, rhetorical interpretation, and pastoral power

Ronald Walter Greene

The problematic situation of rhetoric's materiality emerges from within the desire of rhetorical scholars to maintain rhetoric as a practical art situated in time and space while also advancing rhetoric as an interpretive art robust enough to isolate the influential character of nearly anything. As a practical art, rhetoric's materiality is registered in how humans craft discourse for the purpose of making public decisions. As an interpretive art, rhetoric's materiality is often recorded in the growth of objects that exhibit social influence. From speeches to soap operas and from movies to sculpture, rhetoric's materiality proliferates with every means of persuasion. As an object of rhetorical interpretation, the available means of persuasion are limitless. Between the practical and the interpretive dimension of rhetoric, rhetoric's materiality tends to be registered in three ways: "a traditional one that insists upon considering the material conditions of discourse, another that focuses upon the lived-in body as a condition and consequence of rhetoric, and still another that understands rhetoric as itself material" (Blair 2001: 287–288).

To imagine rhetoric as itself material encouraged rhetorical scholars to explore different material modalities of persuasion (sculpture, city space, and media form) as well as to attend to "the signifier and its constitutive effects" prompting a "shift of theoretical and critical interest in the field from rhetorical materialism to rhetoric's materiality" (Biesecker & Lucaites 2009: 4). My own contribution to rhetoric's materiality was to advance a view of rhetoric as a multidimensional human technology of governance (Greene 1998). As such, rhetoric's materiality is a result of an institutional combination of rhetorical form (speeches, film, debate, and discussion) and rhetorical purpose (persuasion, collaboration, and education) directed toward a population. To isolate rhetoric's materiality in this way highlights Michel Foucault's (1988, 1991) later work on human technologies and the art of governance more so than his notion of discourse.

However, my project does not assume the need to abandon a rhetorical materialism to highlight rhetoric's materiality. First, it advances a rhetorical materialism less concerned with discovering the determinative conditions of discourse than one oriented toward the articulation and uptake of rhetorical practices into an apparatus of power. Second, it

advances a material approach to subjectivity as the outcome between the elements of a material rhetoric and the relations of forces traversing a mode of production (Greene 2009). The argument advanced in this chapter is that the isolation of rhetoric's materiality as an object of the study, absent of a rhetorical materialism, supports a will to power of rhetoric as an interpretive art. Without rhetorical materialism, a material rhetoric is simply a way to offer objects to a rhetorical hermeneutic documenting the constitutive effects of objects/forms of social influence. This is especially the case as the materiality of rhetoric is less registered in the signifier and more in the bodies, buildings, and media of persuasion. To claim that rhetoric is material without understanding how rhetorical interpretation is a cultural technology (a material rhetoric, in my terms) risks cultivating a blindness to how rhetorical criticism partakes in an apparatus of power.

To isolate how rhetorical criticism partakes in an apparatus of power, this chapter will start by returning to the Young Men's Christian Association's (YMCA) use of movies in the first half of the twentieth century. This chapter isolates movies as a material rhetoric. As a material rhetoric, movies are approached as a cultural technology for affecting the conduct of specific populations. The first part of the chapter will document the institutional reasoning for the YMCA's Bureau of Motion Pictures and Exhibits (BMPE) use of movies. The purpose of this history is to explain how the YMCA used film exhibition and distribution to modernize subjectivity via pastoral relationships of care. In the second part of the chapter, I will describe how the material rhetoric of film criticism transformed the pastoral dimension of YMCA film exhibition into a technique of democratic citizenship. In the final section of the chapter, I return to the emergence of rhetorical (film) criticism as cultivating similar pastoral relationships of power.

Film exhibition as pastoral power

Beginning in the second decade of the twentieth century, the International Committee of the YMCA invested in the power of film as a way to address a mobile and diverse public. At the heart of this investment was the use of Y buildings as sites of film exhibition and the creation of the YMCA BMPE as an institution for distributing and exhibiting movies. The BMPE was initially an arm of the YMCA Industrial Department. As Thomas Winters narrates, the YMCA Industrial Department, founded in 1903, was tasked with the job of setting up "Industrial YMCAs" in factories and company towns to bring uplift programs to working men "with the goal to overcome class tensions and mitigate industrial conflict" (2002: 32). Under the guidance of Charles Towson, the Industrial Department "extended its reach far beyond company towns and mining and lumber villages into the nation's industrial centers, drawing urban associations everywhere into its fold" (ibid.: 34). The means of social welfare offered by the Industrial Department included "tournaments for shop men, factory athletic and baseball leagues, lectures

on workplace safety, educational classes, talks on personal hygiene and neighborhood socials, and Americanization classes" (ibid.). Greene (2005) documents how the YMCA imagined movie exhibition and distribution as a way to attract people to the Y programs as well as a way for moving the Y secretary out into civic sites such as churches, schools, and industry. For example, in 1912, *Association Men*, the corporate journal of the YMCA Secretary, advised the Y Secretary that "if movie picture shows in your locality are drawing young men away from you, meet this competition by offering them better moving pictures in your association rooms" (1912: 9). The YMCA BMPE came into being to provide these better pictures.

The title of the first catalog of the BMPE (ca. 1920) emphasized the "Use of Industrial and Educational Motion Pictures … in and out of the Association Building". The movie genres were classified as Industrials, Educational, Scenic, American cities, YMCA at Home and Overseas, and Health and Safety. These mundane and didactic movie genres were the backbone of an emerging "nontheatrical" network oriented toward the educational uses of movies. While the number of films offered by the BMPE were modest in comparison to the 1001 films that *Moving Picture Age* (1920) found suitable for nontheatrical uses, by 1919, the BMPE could boast a distribution network that extended to 34 states comprising over 5000 unique exhibitions with 1.8 million people in attendance. As Diane Waldman (1986) notes, one cannot separate the BMPE from the YMCA's more general role in the history of welfare capitalism before the New Deal. As the BMPE catalog put the relationship "Motion pictures … provide an unusual opportunity for developing the platform of mutuality between the managerial and working force in industry" (1920: 4). The YMCA hoped this "platform of mutuality" would soothe class tensions and industrial conflict.

Industrial sponsorship of nontheatrical genres pointed to a class bias inherent in the BMPE catalog. As Steven Ross notes about the 1920s: "the companies most active in crushing unions … were also the most aggressive in producing non-theatricals … shown at local YMCAs" (1998: 224). This class bias informed the exhibition of theatricals as well. Diane Waldman (1986) discovers that the Hollywood movies exhibited by the Industrial YMCA at Rockefeller's Colorado Fuel and Iron Company tended toward ideologically conservative genres and narratives. With 1001 nontheatrical films available by 1920, and the particular exhibition decisions of local Y's waiting to be discovered in the archives, a vast opportunity exists for the rhetorical interpretation of the films distributed by the BMPE and exhibited by a Y Secretary inside and outside his building. However, it was not simply the ideological motive but the educational value of film that interested the YMCA. From class conflict to social hygiene to industrial education to teaching English, the YMCA believed that movies were an efficient and a vivid way to educate working-class men (Greene 2005). What requires closer attention is less the success or failure of the movie to manage a social problem (class conflict), but the Y's reasoning for exhibiting film.

Greene (2005) claims that the YMCA invested in films' "attraction effect" motivating the Y to use movies as a cultural technology for shaping conduct. Movies played a communicative role in what Foucault (1983: 425–426) calls a "block of capacity, communication, and power," but the movies were not alone. Movies were often exhibited with a Y secretary providing interpretive and educational guidance for audiences. A favorite and oft-repeated example provides an illustration of this communicative role of the movie and the Y secretary:

> At one Sunday meeting of 250 non-English speaking men, representing nine Nationalities, the picture used was a melodrama – the story of a moon-shiner, the United States revenue officer and, of course, a pretty mountain lass. For one hour the secretary talked with the picture, reading the titles in very simple English, composing short sentences from the picture action: such as, "the door opens," "the man comes out," "he looks around," "he hears a noise," "he grabs the gun," "he shoots the man," "he is a bad man," "he breaks the law," "he is not a good citizen," "a good citizen will not break the law." Those men went home that afternoon with higher ideals of citizenship, and best of all, they had been helped to think in English.
>
> (BMPE 1920: 8)

The ideological purpose is rather transparent and the success of the message is assumed rather than proven. However, the talking secretary alongside the silent film suggests the use of the film for educational purposes with an emphasis on learning English and a proper civic disposition. Moreover, the exhibition site or rhetorical occasion transforms the abstract relationship between a text and an audience into intimate and concrete encounter between the Y secretary and the men in the audience. The cultural intermediary of the speaking secretary highlights how the exhibition site and discursive spaces cultivated by the Y requires attention to what Tony Bennett refers to as the "ensemble of practices (classification, commentary, pedagogy) which serve to organize and regulate a particular field of textual uses and effects" (1991: 283). In this case, the Y secretary, a melodramatic movie, and a Sunday meeting with 250 non-English speaking men materializes a rhetorical situation that, Greene (2005) argues, expresses the modernization of pastoral power.

Pastoral power is a mode of power, Foucault explains, "whose role is constantly to ensure, sustain, and improve the lives of each and everyone" (2007: 141). With the image of the shepherd and the flock, Foucault suggests that pastoral power took on a special significance after its encounter with Christianity:

> In the Western world, I think the real history of the pastorate as the source of specific type of power over men, as a model and matrix of

> procedures for the government of men, really only begins with Christianity … The process by which a religion, a religious community, constitutes itself as a Church, that is to say, as an instruction that claims to govern men in their daily life on the grounds of leading them to eternal life in the another world and to do this not only on the scale of a definite group, of a city or a state, but of the whole of humanity.
>
> (Ibid.: 148–149)

The YMCA's use of movies provides a mechanism for understanding the modernization of pastoral power. For Foucault, the first step in pastoral power's modernization is that it "is no longer leading people to their salvation in the next world, but rather ensuring it in this world" (1983: 214). The C in the Young Men's Christian Association's name reflects the spiritual roots of the YMCA, yet the history of the Bureau of Motion Pictures corresponds to the YMCA's encounter with worldly social problems. A second way pastoral power modernizes is to "increase … the number and kinds of officials of pastoral power" (ibid.). Y secretaries were not priests or pastors, but they were men. As Thomas Winter documents, between 1877 and 1920, the Y secretary went through a period of professionalization built from a "language of manhood" setting "standards that regulated their behavior, as men from a wide range of social backgrounds congealed into a professional body of men, the secretaryship of the YMCA" (2002: 89). Finally, according to Foucault, pastoral power relies on the development of knowledge concerning both the "population (the many) and the individual (the one)" (1983: 215). It was the institutional use of film in an exhibition site that included the Y secretary, a movie, and an audience that provided the opportunity for the Y secretary to transform this rhetorical situation into a longer term pastoral relationship with each individual. A Y secretary was admonished to "know your group individually" ("Ten Suggestions for College Students Engaged in Industrial Service," ca. 1915: 2). The modernization of pastoral power is partly accomplished by the "institutional role of the YMCA … and the articulation of film as a prosthetic supplement to the Y secretary's voice and touch" (Greene 2005: 31).

The modernization of pastoral power provides one way to account for the deployment of film distribution, exhibition, and reception as material rhetorics in the production of modern subjectivity. The Y's role in the production of modern subjectivity was noted by Antonio Gramsci as "the biggest collective effort to date to create, with unprecedented speed, with a consciousness of purpose unmatched in history, a new type of worker and of man" (1971: 302). As the YMCA exhibits film, and the Y secretary provides textual commentary, its audiences are enlisted into the production of a new subject. A production process Gramsci names Fordism.

Film criticism and the democratic subject

Ian Hunter (1988) provides a genealogy of modern criticism useful for understanding film criticism as a technology of governance. As for modern criticism, Hunter writes that

> it takes the form of a contingent historical space in which the educative imperatives of a special ethical practice and a local "intellectual action" were available to appropriate "man" as an educable being made available by a powerful pedagogical apparatus.
>
> (Ibid.: 213)

For Hunter, the special ethical practice of criticism was provided by the attachment of a romantic aesthetic to the imperative of popular schooling. This romantic aesthetic understood the "functions of criticism" as "primarily exemplary and educative … to secure the recognition of a specific kind of ethical obligation in relation to the shaping of the self" (ibid.: 186). On the other hand, "the appropriation of man" was made possible by the special knowledges supplied by "progressive education and educational psychology" (ibid.: 215) that secured a "division between his empirical behavior or consciousness and the unconscious laws which make this behavior or consciousness possible" (ibid.: 216). The discipline of education was imagined as making the latent laws manifest to the student. Hunter summarizes the emergence of modern criticism as an "unstable space between an aesthetico-ethical practice deployed as a pedagogical norm, and a reflexive intellectual action deployed as a pedagogical discipline" (ibid.). In this section, I want to argue that the YMCA investment in film criticism provides another relay point in modern criticism to participate in shaping a democratic subject.

The ability of film to attract an audience was a key motivation for its use by the YMCA as a way to forge pastoral relationships. Yet the attractiveness of the movies distributed by the YMCA seemed to rely on the lecture skills of those who exhibited the movies. As the 1930s commenced, George Zehrung (1931), the director of the Motion Picture Bureau, stated:

> Many successful experiments have convinced us that it is not so much a matter of content, as it is appropriate application. The teacher who has the patience and ingenuity to discover a cubic content problem in a trail of coal cars, or to find the practical application of a laboratory experiment in hydraulics in a coal mining film, will inject new interests in otherwise dull subjects. The clergymen who finds a parable in the film story of an orange and conveys a practical application of Christ's precepts will give his congregation new spiritual interpretation and information.
>
> (Ibid.: 3–4)

The genres referenced by Zehrung are more likely than not "industrial" films produced by companies about their products and processes. From the company's standpoint, the film was as much advertising as education. Zehrung's emphasis on application over content indicates how cultural intermediaries might secure their pastoral relationship with their audiences by offering creative lessons. What was necessary for this act of rhetorical invention and repurposing was "a deliberate goal, careful preparation and wise selections" (ibid.: 4). In so doing, the cultural authority could make the dull subject interesting and spark a disposition toward learning/salvation in their audience.

Regardless of whether cultural authorities labored to make dull movie subjects interesting, the exhibition of movies with the aid of a cultural authority to guide the reception of the audience is central to what I have termed "pastoral exhibition" (Greene forthcoming: 208). This model of pastoral exhibition was made more robust by the inclusion of Hollywood genres into the relationship between the Y secretary and youth in the 1930s. However, unlike the talking secretary beside the silent film, the Y secretary reshaped his pastoral relationship with boys through a new block of capacity-communication-power: group leadership, the use of Hollywood genres, and the cultivation of kids that enjoyed movies. The key pedagogical intervention was to transform a movie into an object of film criticism. If the Motion Picture Bureau could not always guarantee "better movies," then perhaps the Y secretary could make better audiences.

By the 1920s, the YMCA's Industrial Department were forming and guiding group activities "to transform disruptive and destructive emotions of adult working men into constructive social impulses by giving outlet to their productive energies" (Winters 2002: 136). Like other programs designed by the Industrial Department, the goal was to defuse class conflict. However, as the Industrial Department closed in the later part of the 1920s, the use of group dynamics increased in the boys division of the YMCA by blending progressive educational psychology with group processes (Hopkins 1951: 550). The upshot of the uptake of educational psychology and group process moved the boys unit away from evangelical uses of the Bible "as an end in itself" and toward "fostering boys' initiative in camping and club activity" (ibid.).

An important figure linking the group work of the boys division with the practice of film criticism was Able Gregg. After joining the National Staff in 1919, Abel Gregg quickly began to use natural social groups among the boys as a way to promote active learning. By the mid-1920s, Gregg was organizing the "Christian Citizenship program" relying more on group dynamics and club activities while "Bible study, so important earlier, virtually disappeared" (ibid.: 551). The popularization of the Payne Studies in Henry James Foreman's (1933) *Movie Made Children* provided the impetus for using film texts to organize group activities and to align these group activities with the film appreciation movement in the early 1930s.

Foreman's *Movie Made Children* presented the Payne Studies in such a way as to magnify the dangers that movies posed to children (Jowett *et al.*, 1996: 101–108). For Eric Smoodin, the dangers of movie reception relied on "a notion of childhood and adolescent spectatorial passivity, of a mass audience that because of its immaturity could generate little resistance to what they saw on the screen" (2004: 94). One solution to this problem was to enlist the audience into a more active form of movie reception. Lea Jacobs names this pedagogical imperative the "film education movement" and describes it as

> a series of efforts to regulate the conditions and effects of film viewing … by loosely related organizations which sponsored the development of film appreciation courses in an attempt to alter the film going habits of children and adolescents.
>
> (1990: 29–30)

So, in the wake of the Payne Fund Studies, a film education movement emerged in the United States emphasizing character education, group process psychology, and film appreciation (Morey 2003: 148–189).

Abel Gregg used Foreman's book to introduce the Payne Fund Studies to the YMCA and to nominate the YMCA as an agent in the film education movement. Gregg represented the study of motion pictures as a way to redeem movies from a purely economic motive:

> To bring about the rescue of this modern medium of amusement and education from the hands of a group which seeks to use it for selfish economic ends may take some little time. But it will be done. The pathway to this rescue is increased understanding of the motion picture as art and as education on the part of all who go to the movies.
>
> (1933: 1)

Drawing on a host of resources, especially Edgar Dale's "How to Appreciate Movies," Gregg encouraged group leaders to organize groups and lead those groups in discussions about film.

The use of group discussion is an important adjustment in the YMCA's deployment of the Secretary's voice associated with its exhibition of movies. More than anything it shifted the locus of truth telling. Earlier, occupying the standpoint of the lecturer, the Y secretary provided the truth about the movie. Now as a group leader, the youth/audience would increasingly become the locus of truth telling. For example, group leaders were encouraged to ask the members of the group: "How many movies they went to last week … Ask why he went to each movie attended the past week and to list any other reasons people have for going to the movies" (ibid.: 4). In so doing, the group leader was supposed to lead the group members toward the evaluation of the movies they attended.

As a pastoral technique, the group discussion techniques deserve special consideration. First, the shift in the locus of truth telling from the lecturer to the student provides a mechanism by which the student becomes a citizen: As White and Hunt remark

> To be a free citizen obliges us to not only to tell the truth, but also requires us to engage in practices that reveal certain truths about ourselves. Truth telling is crucial to citizenship because it is what enables one to produce specific truths about oneself [and] … makes one subject of government.
>
> (2000: 95)

Put differently, pastoral power of film is democratized through the use of discussion techniques to inculcate in the student/boy the practice of truth telling about his movie reception. Second, the use of group discussion techniques was advanced as a democratic method. The point of the group work at the YMCA was to use the group leader to help the boys make a judgment about the quality of the movies they enjoy. A lecturer in a pastoral relationship was too closely aligned with an autocratic model of citizenship because he told the audience the truth, while the use of group discussion provided a more active and democratic method of judgment. For Gregg, a Y Secretary should use a democratic method to guide discussion because

> The democratic method provides experience with a method which the boy is called upon to know and understand, because of his living in a country governed in a democratic way. He must learn how to judge by practicing judgments with satisfaction, in situation after situation, from boyhood to manhood, and be thus prepared to carry his share of his country's responsibilities and government.
>
> (1927: 67)

By creating movie going groups and deploying this discussion technique with the rating tools developed by the advocates of film appreciation, the group leader was able to encourage the boy/adolescent to speak the truth about his popular desires while also making the boy accountable to the group's discussion of the aesthetic and moral value of good films. In this way, the material rhetoric of film criticism was articulated to a pastoral relationship as a technique of democratic subjectification.

Rhetorical criticism and pastoral power

The first two sections of this chapter describe the pastoral dimensions of the YMCA's involvement in film exhibition and modern film criticism, but, this history also provides a way to contextualize rhetorical criticism as an

interpretive art of social commentary. What such a history reveals is how the materiality of rhetorical criticism participates in the production of modern subjects. The rationale for rhetoricians to turn their attention to film was provided by Hendrix and Wood: "Just as orators arise to meet our social crisis, film makers continue to show us their representations of social reality and thus to influence our perceptions and attitudes" (1973: 122). While discussing the need for rhetorical critics to attend to different media forms, Medhurst and Benson highlight the importance of such interpretive labor to promote democratic citizenship: "As we start to understand the complex interactions of medium with content, we take one more step toward the preservation of democratic forms of government where the people, through their collective ability to persuade rule" (1991: viii). The move toward popular media forms generated a shift away from viewing rhetoric as a specific kind of text to a more general "social function that influences and manages meaning … enabling scholars to think of some aspects of experience as rhetorical … that might not otherwise be so considered" (Brummett 1991: xii). As rhetoric becomes a dimension of (popular) culture, its object domain proliferates, even as that object domain returns as a social text worthy of commentary. Like Y secretaries narrating the moral lessons of a film, the rhetorical critic is encouraged to speak of the democratic lessons of popular media by exposing how they influence an audience's social reality. The purpose of rhetorical criticism takes on pastoral dimensions when a critic is called upon to "empower those who are disadvantaged by rhetorical influences of which they have been unaware because those influences hide in seemingly innocuous artifacts of culture" (ibid.: xiii). The rhetorical criticism of culture is advanced as a means of political uplift; an empowerment of democratic citizenship by making manifest influences unacknowledged by an audience.

The role of rhetorical criticism as a pastoral mode of democratic subjectification puts pressure on the claims of rhetorical criticism to advance itself as a generalizable interpretive art capable of critical and aesthetic commentary on unlimited means of persuasion. To learn the ways of rhetorical interpretation is to be encouraged to become a critic. While addressing student/readers, Barry Brummett describes becoming a critic as

> a kind of calling … committed to close reading, to paying attention … on a mission to inform self and others about what messages and experiences are doing to us so as to shape how we think and act.
>
> (2009: 19)

The techniques of close reading suggest a mode of rhetorical inquiry in which messages and experiences are subject to what Colin Mercer once described as a "street wise semiosis which will transport all social forms and practices into manageable – because readable – domains of representation" (1991: 63). Yet, for Mercer, the investment in reading a "text" as a means of

social commentary too easily displaces the techniques by which the text is put to use. The call to be a critic is one such use of the art of rhetorical interpretation. So too was the pastoral relationship of film criticism put into practice by the Y secretary as a group leader. To be a participant in this street-wise semiosis is to invite the student into an ethical obligation to read social texts wisely and share that reading with others. It is, at the same time, to participate in a "political economy of the sign whose principal mode of analysis in not to be found in semiotics but in human resource management" (ibid.: 64).

To recognize textual commentary less as a generalized art of rhetorical interpretation and more as a pastoral technology is to pay closer attention to the institutionalization of rhetorical criticism. The intellectual priority of rhetorical criticism as a professionalized mode of knowledge production interpreting cultural forms, displaces the teaching of rhetorical criticism within the more pastoral context of the classroom. The desire to produce rhetorical critics is not so far removed from group techniques as a technology for making citizens. Approaching rhetorical criticism in light of the modernization of pastoral power offers a rhetorical materialism of the forms and purposes rhetoric might take (rhetoric's materiality). It also puts into relief the use of rhetorical interpretation as a will to pastoral power.

References

Bennett, T. (1991) *Outside Literature*, London: Routledge.

Biesecker, B.A. and Lucaites, J.L. (2009) "Introduction," in Biesecker, B.A. and Lucaites, J.L. (eds.) *Rhetoric, Materiality & Politics*, New York: Peter Lang.

Blair, C. (2001) "Reflections on criticism and bodies: Parables from public places," *Western Journal of Communication* 65: 271–94.

Brummett, B. (1991) *Rhetorical Dimensions of Popular Culture*, Tuscaloosa: University of Alabama Press.

Brummett, B. (2009) *Techniques of Close Reading*, Thousand Oaks, CA: Sage.

Bureau of Motion Pictures and Exhibits. (ca. 1920) *Use of Industrial and Educational Motion Pictures in the YMCA Practical Program In and Out of the Association Building*, New York: International Committee YMCA.

Foreman, H.J. (1933) *Our Movie Made Children*, New York: Macmillan.

Foucault, M. (1983) "Afterward: Subject and power," in Dreyfus, H. and Rabinow, R. (eds.) *Michel Foucault: Beyond Structuralism and Hermeneutics*, 2nd edn, Chicago, IL: University of Chicago Press.

Foucault, M. (1988) *Technologies of the Self*, Amherst, MA: University of Massachusetts Press.

Foucault, M. (1991) "Governmentality," in Gordon, C., Burchell, G. and Miller, P. (eds.) *The Foucault Effects: Studies in Governmentality*, Chicago, IL: University of Chicago Press.

Foucault, M. (2007) *Security, Territory, Population: Lectures at the College de France*, trans. Graham Burchell, Sennellart, M., Ewald, F., Fonatan, A., and Davidson, A. (eds.), London: Palgrave.

Gramsci, A. (1971) *Selections from the Prison Notebooks*, London: Lawrence and Wishart.

Greene, R.W. (1998) "Another materialist rhetoric," *Critical Studies in Mass Communication*, 15: 21–41.

Greene, R.W. (2005) "Y movies: Film and the modernization of pastoral power," *Communication and Critical/Cultural Studies*, 2: 20–36.
Greene, R.W. (2009) "Rhetorical materialism: The rhetorical subject and the general intellect," in Beisecker, B.A. and Lucaites, J.L. (eds.) *Rhetoric, Materiality & Politics*, New York: Peter Lang.
Greene, R.W. (2011) "Pastoral exhibition: The YMCA motion picture bureau and the transition to 16MM, 1928-39," in Wasson, H. and Acland, C. (eds.) *Useful Cinema: Expanding the Contexts of Film Culture*, Durham, NC: Duke University Press.
Gregg, A.J. (1927) *Group Leaders and Boy Character*, Revised edn, New York: Association Press.
Gregg, A.J. (1933) "Are you made by movies," *Christian Citizenship for Group Leaders*, 12(8): 1–6.
Hendrix, J. and Wood, J.A. (1973) "The rhetoric of film: Toward critical methodology," *Southern Speech Communication Journal*, 39: 105–22.
Hopkins, C.H. (1951) *History of the YMCA in North America*, New York: Association Press.
Hunter, I. (1988) *Culture and Government: The Emergence of Literary Education*, London: Macmillan.
Jacobs, L. (1990) "Reformers and spectators: The film education movement in the thirties," *Camera Obscura*, 22: 29–49.
Jowett, G.S., Jarvie, I.C., and Fuller, K.H. (1996) *Children and Movies: Media Influence and the Payne Fund Controversy*, New York: Cambridge University Press.
Medhurst, M.J. and Benson, T.S. (1991) *Rhetorical Dimensions in Media*, 2nd edn, Dubuque, IA: Kendall/Hunt.
Mercer, C. (1991) "Neverending stories: The problem of reading in cultural studies," *New Formations*, 13: 63–74.
Morey, A. (2003) *Hollywood Outsiders: The Adaptation of the Film Industry 1913–34*, Minneapolis, MN: University of Minnesota Press.
Moving Picture Age. (1920) *1001 Films*, Chicago, IL: Class Publications.
Ross, S.J. (1998) *Working Class Hollywood: Silent Film and the Shaping of Class in America*, Princeton, NJ: Princeton University Press.
Smoodin, E. (2004) *Regarding Frank Capra: Audience, Celebrity, and American Film Culture, 1930–60*, Durham, NC: Duke University Press.
Ten Suggestions for College Students Engaged in Industrial Service. (ca. 1915), YMCA File: Industrial Work/Immigration Work, 1908-15, Box 10, Minneapolis, MN: Kautz Family YMCA Archive, University of Minnesota.
Waldman, D. (1986) "Towards a harmony of interests: Rockefeller, the YMCA, and the company movie theatre," *Wide Angle*, 6: 39–48.
White, M. and Hunt, A. (2000) "Citizenship: Care of the self, character, personality," *Citizenship Studies*, 4: 93–116.
"Who's Who: George J. Zehrung." (1931) *National Board of Review Magazine*, 6: 3–5.
Winters, T. (2002) *Making Men, Making Class: The YMCA and Workingmen, 1877-1920*, Chicago, IL: University of Chicago Press.

Part IV

Communication mobility/ immobility

Sink and swim (White flour, footage of embryonic salamanders).
Francesa Talenti.

Chapter 16

Materializing US–Caribbean borders

Airports as technologies of communication, coordination, and control

Mimi Sheller

The convergence of intense human mobilities, financial flows, economic turbulence, and heightened securitization of borders make this a crucial period in which to study the implementation and impact of new mobility regimes and "smart borders."[1] This also requires attention to the effects of shifting discourses, representations, and ideologies of im/mobility and opening/closure of borders. Research on the sociocultural dimensions of air travel and airports has brought new attention to the cultural and informational dimensions of air travel within the field of "aeromobilities" research (Adey 2004a, 2004b, 2009a, 2010; Cresswell 2006; Salter 2006, 2008; Adey *et al.* 2007; Urry 2007; Cwerner *et al.* 2009).[2] There is an emerging view of the airport as a site of both complex materialities and complex flows of information, communication, and discourses concerning mobility, security, and borders. As a site "imbued with power and control," Peter Adey suggests, "the airport is now a surveillance machine – an assemblage where webs of technology and information combine" (2004b: 1375). Forms of vision, design, communication, and cultural circulation are all caught up in the production of what is broadly called aeromobility and its meanings (Sheller 2010).

Materialist approaches to communication offer an important perspective in which to situate the contemporary surveillant assemblage of the airport. For James Carey, the advent of the telegraph "freed communication from the constraints of geography" and in so doing "not only altered the relation between communication and transportation; [but] also changed the fundamental ways in which communication was thought about" (Carey 1983; and see Packer and Robertson 2007). Similarly, the advent of mobile communication technologies and software-supported transportation networks also fundamentally changes how communication is thought about, but in this case by re-embedding it into transportational infrastructures and spaces of transit, which are also spaces of transmission. Airports are one of the prime examples of communication-intensive infrastructure, dependent as they are on online reservation, digital ticketing and flight management systems, air traffic control systems, baggage and freight routing software, and generally "software-sorted mobilities" (Wood and Graham 2006). Conceptually and materially, transport and

transmission are currently intricately linked, especially at airports, and need to be studied in conjunction with each other.

Furthermore, Carey first made the point that communication technologies such as the telegraph played a crucial role not just in communication, but in coordination and control, and in the creation of new temporalities (such as futures markets and universal time). His work foresaw the role of the computer in again shifting the relation between technology and ideology, and reworking coordination and control. As Jeremy Packer observes, "transportation has become increasingly dependent upon communications at the behest of safety and security. Second, this linkage depends upon a conceptualization of how to use transportation and communication technologies to 'govern at a distance'" (Packer and Robertson 2007: 6; see Packer 2007). It is here that we can begin to rethink the role of transnationally extensive communication and transportation networks in the USA's efforts to assure safety and security of its borders by governing at a distance, with a particular focus on the role of the airport as a technology of communication, coordination, and control. For my purposes, this chapter will focus especially on the US–Caribbean border as one instantiation of this.

How do the transport and communication infrastructures that make up air travel come together with visions of mobility and accessibility, and discourses of security and safety, to produce highly differentiated experiences of travel – and along with them uneven spatialities and temporalities? Remarkably, there have been no major studies of the construction of the US–Caribbean border, its evolving forms, and its impact on Caribbean mobilities. I want to argue that the very practices that claim to perform the connection of Caribbean localities into new mobility regimes and communication infrastructures simultaneously produce the differentiated subjectivities, uneven spatialities, and unequal distributions of mobility capital that are decreasing the "motility" (i.e., potential mobility; Kaufmann *et al.* 2004) of the majority of citizens of Caribbean countries. While the potential for movement and the capacity for movement are being increased for foreigners (and foreign capital) who wish to enter the region, both the potential and the capacity for movement are being decreased for its inhabitants, placing them in a "slow lane" separated from the high-speed "kinetic elite." Governing at a distance is thus achieved via the "modernized" infrastructures of communication and air travel – with their new modes of securitization, surveillance, and control – that assure the mobility of North Americans through the Caribbean, while fixing or mooring Caribbean nationals in place, or relegating them to dangerous, illegal, and undocumented forms of slow, convoluted, or circular mobility.

Although there have been numerous calls for further study of the complex global flows of people, objects, capital, information, and risks around the world (Appadurai 1996; Hannerz 1996; Urry 2000, 2007), most research into technologically advanced mobilities still focuses on the global North and lacks comparative approaches within the global South. While

there is a longstanding interest in themes of migration, exile, and transnational ways of life among Caribbean writers and artists (DeLoughrey 2007), few incorporate new technologies of *air mobility* into that tradition. Within Caribbean Studies, specialists tend to work within particular national or linguistic contexts, so that it is also difficult to gain a perspective on mobilities across the region or a comparative overview of differentiated "mobility regimes" (Canzler *et al.* 2008). Caribbean mobilities were central to the initial theorizations of mobile diasporas (Gilroy 1993), transnationality (Basch *et al.* 1994; Clifford 1997), and creolization (Glissant 1992, 1997; Benitez Rojo 1996), yet only recently has there emerged a body of work offering empirical research on Caribbean transnational migration as part of the making of a "Trans-Caribbean" region (Puri 2003; Henke and Magister 2007; Jaffe 2008) including the formation of "transnational families" (Bauer and Thompson 2006) and "longdistance nationalism" (Schiller and Fouran 2001).[3] Caribbean modernity, with its disjunctive temporalities, depended on the multiple intersecting mobilities and immobilities generated by shipping routes, airline networks, communications infrastructures, and peoples, cultures and images on the move, being both demobilized and remobilized in relation to colonial and postcolonial political economies (Sheller 2004, 2009b).

James Carey's work is also telling in this regard. Although he focused on North America, his materialist perspective on communication offers insights into other colonial and postcolonial regions of the Americas. When he turns to an investigation of the telegraph in the domain of empire, he points out four factors:

> the role of the telegraph in coordinating military, particularly naval, operations; the transition from colonialism, where power and authority rested with the domestic governor, to imperialism, where power and authority were reabsorbed by the imperial capital; the new forms of political correspondence that came about when the war correspondent was obliged to use the telegraph; and the rise of the first forms of international business that could be called multinational.
>
> (Carey 1983: 309)

Each of these points hints at crucial insights into Caribbean airports as technologies of communication, coordination, and control today. Just as the telegraph reshaped nineteenth-century spatiality and temporality, so too does the complex assemblage of the airport as an infrastructure for communication and transportation have the capacity to restructure space and time, with significant implications for military operations, global governance, media production and transmission, and transnational business.

First, as Caren Kaplan points out, contemporary airports historically developed from military airfields and the drive for "air power" afforded huge military advantages to those who controlled the "cosmic view" from

aerial vision technologies (Kaplan 2006). Control over air space continues to play a significant part in allowing the USA to dominate the Caribbean region through air power and air-supported naval operations. This is noticeable not only during military operations in the region (such as the 1983 invasion of Grenada), but also in interventions such as the US take-over of the Toussaint Louverture International Airport immediately following the Haitian earthquake of January 2010. While still maintaining military bases in places such as Guantanamo Bay, the USA effectively controls the Caribbean region with neither colonial nor imperial authority, but through more dispersed and distanciated forms of power, which can be quickly deployed by controlling the air space and the satellite networks that together enable both transportation and transmission. Just as effective is the US embargo of Cuba and closure of air space, communication, and trade between the two countries. These facts are the backdrop to all sovereign power in the region, which depend on the *laisse majesté* of the USA.

Second, a number of Caribbean islands specialize in the high-speed financial mobilities associated with "offshore economies" – tax havens, free trade zones, export-processing zones, flags of convenience, internet business, shell banks – which can be viewed as part of a larger process of what Ronen Palan calls the "radical redrawing of state sovereignty" through new "state fictions" (1998). They form part of the "offshore economy" which "consists of largely unregulated legal spaces, external to but nevertheless supported by the state system" (Roberts 1994; Cameron and Palan 2004: 17). As "an 'in-between' juridical realm where states are able or willing to apply only a certain degree of regulation" (Palan 1998: 637), the Caribbean offshore banking sector has recently faced renewed scrutiny by the Organization of Economic Cooperation and Development. International institutions for economic governance have also put pressure on Caribbean states to restructure in the interest of securing international business. A recent World Bank Report entitled "A Time to Choose: Caribbean Development in the 21st Century" (2005), for example, calls for "rapid liberalization of air services and cessation of Government support for national regional carriers" in the Caribbean. It emphasizes that "Caribbean countries must improve their performance in the areas of infrastructure, policy and legal environment, and taxation and customs" in order to attract foreign investment; and there is an especially strong emphasis on the privatization of airlines, telecommunications and other public services (electricity, water, and ports) and the implementation of regional regulatory approaches that will open these sectors to external private financing and investment. Here we find an explicit connection between infrastructures of communication and transportation, articulated as a policy to privatize and liberalize markets in both areas in the interests of business, rather than citizens.

Third, international governance, policy-making and decision-makers have a massive impact on the small states of this fragmented region. Viewed as the USA's Third Border since President George W. Bush's "Third Border

Initiative" of 2001, the region is subject to new US homeland security legislation under the Aviation and Transportation Security Act of 2001 (Bryan and Flynn 2002), which has led to the tightening up of screening for all airline passengers, baggage and cargo, including new airport architectures, Vehicle and Cargo Inspection System (VACIS) X-ray machines for container ports, and new "smart border" technologies such as the region's early implementation of electronic passport checks against the Interpol database. In 2007, the USA for the first time required passports for all travel to international destinations in the Caribbean. A central aspect of the opening of Caribbean air space for business and for tourism, therefore, is the securing of borders through new information technologies.

In the Caribbean today, as in airports across the world, there are new forms of intensive surveillance and software-supported sorting of people, luggage, and freight at borders (Adey 2004b, 2009a; Wood and Graham 2006; Salter 2006; Sparke 2006). Information systems are crucial to the management and servicing of airports and air travel, in particular involving the recent turn toward Security Management Systems to integrate risk management, ranging from the Computer-Assisted Passenger Pre-screening System to the operation of Explosive Detection Systems for baggage (Adey 2004; Salter 2008). Wood and Graham suggest that automated software for sorting travelers as they pass through airport surveillance systems, such as biometric iris-recognition systems and new palm-recognition technology, is increasingly producing a "kinetic elite" whose ease of mobility differentiates them from the low-speed, low-mobility majority. Airports act as "data filters" in which surveillance is enabled by what David Lyon calls the "informatting" of bodies and the "securitization" of identity at the newly deployed "smart border" (2008). Adey points out that "environments such as airports are developing a greater reflexivity. As airport surveillance and control become more sophisticated, airports are becoming more automated, integrating software programs with electronic data and monitoring technologies" (2004: 1376). Packer (2008) describes this in terms of the shift from a Foucaultian disciplinary state to a Deleuzian "control state," in which information, tracking, and algorithmic prediction are crucial.

In particular, we need to pay more attention to the intersection of neoliberalizing discourses of capital mobility and tourism mobility, such as the so-called Open Skies agreements which allow US airlines greater access to other countries' airports, with the simultaneous increase in border surveillance and software control in producing the intricately choreographed mobilities of Caribbean nationals through regional and US airports (Dodge and Kitchin 2004; Adey and Bevan 2006). As Heyman argues in regard to the US–Mexican border, at issue under heightened security regimes "is how emerging systems of regulation intensify existing practices of unequal social categorization, risk, and mobility" (2004: 321), leading to the differential allocation of mobilities (Cunningham and Heyman 2004). Flows of investment (including illegal flows of drugs, guns, and money) and transnational

regulation of such flows impact on the forms of state sovereignty, new forms of securitization, surveillance, and governance of mobility in the region. And these new mobility regimes in the Caribbean region are in turn restructuring spatiality, state sovereignty, and citizenship in the context of crossing the US "Third Border." These complex processes of interaction between discourses of mobility and materializations of communication and transportation infrastructures on the border have important implications for the uneven distribution of mobility capital, producing new inequalities in the motility of differently located subjects. Airports are spaces where these systems converge and diverge, and around which discourses and representations of mobility are produced, such as facilitating business mobility, securing tourist mobility, or blocking illegal mobility.

There is a significant body of work on Caribbean tourism (e.g., Pattullo 1996; Duval 2004; Klein 2008), yet few studies address the combined mobilities of people, objects, texts, and technologies that perform tourism in relation to different forms of stillness and movement (see Sheller and Urry 2004). Tourism, the largest economic sector in the region, depends on a geography of mobility and interconnectivity that not only brings foreign visitors into a country, but also brings some local populations to work in tourist areas (while excluding others), and ties places into complex webs of product advertising, place promotion, and information processing technologies for booking reservations, ticketing, and airport and port logistics. Tourism marketing is of course deeply tied to forms of media production and transmission in which particular destinations are positioned, and linked to transportation networks and "packages." Tourism also depends on *discourses of mobility*, as much as actual practices of mobility. Efforts to make the Caribbean accessible to mobile travelers and to new technologies of mobile communication can be highlighted in the promotion of luxury real estate and new forms of mobile residency. Elsewhere I have used the example of the private resort development at Dellis Cay in the British Overseas Territory of the Turks and Caicos Islands to show how new virtual islands – amalgams of infrastructure, architecture, and software – are being unbundled from local communities, citizenries, and publics, and repackaged as intensely capitalized destinations of luxury tourism and foreign ownership (Sheller 2007, 2009b). Here, Caribbean space is being socially and politically produced under new conditions of commercialized sovereignty, virtual cyberproperty, and fictional residency.

Software-supported logistics, data-processing, property development, building design, marketing, internet banking, travel, and surveillance together enable the disembedding of island space from structures of local governance and territoriality. New forms of infrastructural exclusivity, computer-aided design, media-savvy web-based property marketing, and uneven forms of software-sorted mobility and mobile communications connectivity underwrite proprietary regimes that assist in channeling who has access (or does not) to various kinds of real estate and virtual territories

(Sheller 2009a, 2009b). As development takes place and land is owned, transferred, structured, accessed, and consumed in new ways, different groups of people gain or lose access to homes, neighborhoods, resources, livelihoods, public space, and national space. I call for extending the analysis of such phenomena by focusing on the new modes of controlling and tracking Caribbean citizens leaving and re-entering their national territories, even as their "offshore" economies are opened up to external flows of foreign capital, property ownership and internet-based business. New understandings of US–Caribbean "Third Border" security infrastructures, and the threats and risks presented along that multi-locational and irregular border, must address the ethics of differentiated mobility, the mechanisms that foster and impede mobility rights, and the varied forms of identification, detainment, detention, and deportation that are used to police the border. As a site of both transport and transmission, the airport is crucial a technology of predictive control and coordination, reshaping the spatialities and temporalities that divide the USA from the Caribbean and enable governance at a distance.

Conclusion

By bringing together studies not only of exile, migration, transnationalism, and tourism, but also of mobile communications, offshore finance, free trade policies, and so on, a new critical mobilities paradigm informed by materialist approaches to communication can begin to show how the material, symbolic, and discursive dimensions of mobility intersect within infrastructural practices. Mobilities research in its broadest sense concerns not only physical movement, but also potential movement, blocked movement, immobilization, and forms of dwelling and place making (Büscher and Urry 2009; Büscher *et al.* 2010). It recognizes the idea of potential movement and differential capacities and competencies for movement through the concept of "motility," which refers to "the manner in which an individual or group appropriates the field of possibilities relative to movement and uses them" (Kaufmann and Montulet 2008: 45). Mobility capital is the combination of competences, skills, equipment, and social capital that allows for relatively high motility. Access to and capacities to use information are as important in the formation of motility as are actual transits through physical space.

In contrast to earlier "nomadic theory," mobilities researchers now attempt to capture the dialectics of mobility and immobility, to analyze the relations of power that shape the meanings and practices of mobility and stillness (Cresswell 2006; Bissell 2007; Bissell and Fuller 2009), and to acknowledge the more ephemeral, embodied, and affective dimensions of interlocking relational (im)mobilities (e.g., Hannam *et al.* 2006; Adey 2009b, 2010; Fincham *et al.* 2010). Issues of uneven motility and of mobility rights, ethics, and justice have also become crucial to the field (Cresswell

2006; Bergmann and Sager 2008; Uteng and Cresswell 2008). In this chapter, I have tried to suggest some of the ways in which the remaking of infrastructures of air travel on the US–Caribbean border have implications not only for communication and transportation, but also for wider processes of coordination and control.

Caribbean islands, already used as offshore tax havens and free trade zones, are being further disembedded from national territories and repackaged as luxury enclaves that are hyperconnected to global metropolitan transport, media, and data flows – at the very same moment that the region's poorest people are trapped by ever-more powerful border control regimes and enforced immobilities. Disasters like Haiti's earthquake throw into even sharper relief the chasm between the mobile kinetic elite and the people mired in camps for the internally displaced, placeless yet immobile. Fictions of the offshore state, mechanisms supporting highly liquid financial movements, and the infrastructures of tourist mobility and security, all collide with realities on the ground wherein the material spaces of movement and dwelling are being reshaped to the disadvantage of citizenries without sovereign territories. This particular materialization of communication on the border produces the spatial and temporal vortices in which rickety boats wash up on rocky shores, or overturn at sea chased by Coast Guard Cutters; in which people who have lived most of their lives in the USA are deported back to the islands of their birth, with no chance for return; in which people starve to death and die of cholera just a short flight away from Miami.

Finally then, I conclude that the very moves by which some international actors claim to connect the Caribbean into new mobility regimes and into open communication infrastructures simultaneously produce differentiated mobilities, uneven spatialities, and unequal distributions of mobility capital. Airports remake the space–time of travel and communication, but do so in ways that serve to recreate the unequal subject positions and discrepant temporalities of earlier phases of modernization. And so the border is materialized as an insurmountable barrier between those who gain from its existence, and those whose life chances, opportunities, and freedoms are held back in a place apart, yet a place so easily accessible to capital, to tourists, to transnational do-gooders and disaster responders, to reporters and missionaries, and to all who do not call it home yet claim the inalienable right to be there.

Notes

1 I use the term "smart borders" to describe border regimes employing new information and communication technologies, software systems, and biometrics. It does not reflect any judgment as to whether such borders actually are a smart policy or work especially effectively.

2 There have also been several ethnographies of "life in the air" (Gottdiener 2001; Fuller 2003; Lassen 2006; Codourey 2008; Kellerman 2008); some significant cultural histories of the airport as a kind of social technology (Fuller and Harley

2005; Adey 2006; Gordon 2008); and new approaches to airport security (Amoore 2006; Lyon 2008; Amoore and Hall 2009).

3 In previous work I have shown how the colonial Caribbean was generated out of flows of plants, people, ships, foodstuffs, technologies, travel narratives, visual images, and venture capital (Sheller 2003). The Caribbean region is more "deeply and continuously affected by migration" than any other world region (Foner 1998: 47), and it is often said that the "essence of Caribbean life has always been movement" (Thomas-Hope 1992; Duval 2002: 261).

References

Adey, P. (2004a) "Secured and Sorted Mobilities: Examples from the Airport," *Surveillance and Society*, 1: 500–519.

Adey, P. (2004b) "Surveillance at the Airport: Surveilling Mobility/Mobilising Surveillance," *Environment and Planning A*, 36: 1365–1380.

Adey, P. (2006) "Airports and Air-Mindedness: Spacing, Timing and Using Liverpool Airport, 1929–39," *Social and Cultural Geography*, 7(3): 343–363.

Adey, P. (2009a) "Facing Airport Security: Affect, Biopolitics, and the Preemptive Securitisation of the Mobile Body," *Environment and Planning D: Society and Space*, 27: 274–295.

Adey, P. (2009b) *Mobility*. London: Routledge.

Adey, P. (2010) *Aerial Life: Spaces, Mobilities, Affects*. Oxford: Wiley-Blackwell.

Adey, P. and Bevan, P. (2006) "Between the Physical and the Virtual: Connected Mobilities," in M. Sheller and J. Urry (eds) *Mobile Technologies of the City*. London: Routledge.

Adey, P., Budd, L. and Hubbard, P. (2007) "Flying Lessons: Exploring the Social and Cultural Geographies of Global Air Travel," *Progress in Human Geography*, 31(6): 773–791.

Amoore, L. (2006) "Biometric borders: Governing mobilities in the war on terror" *Political Geography*, 25: 336–351.

Amoore, L. and Hall, A. (2009) "Taking bodies apart: digitized dissection and the body at the border", *Environment and Planning D: Society & Space*, 27 (3): 444–464.

Appadurai, A. (1996) *Modernity at Large: Cultural Dimensions of Globalization*. Minneapolis: University of Minnesota Press.

Basch, L., Glick Schiller, N., and Szanton Blanc, C. (1994) *Nations Unbound: Transnational Projects, Postcolonial Predicaments, and Deterritorialized Nation-States*. Amsterdam: Gordon and Breach.

Bauer, E. and Thompson, P. (2006) *Jamaican Hands Across the Atlantic: Transnational Families*. Kingston: Ian Randle.

Benitez Rojo, A. (1996 [1992]) *The Repeating Island: The Caribbean and the Postmodern Perspective*, 2nd Ed., Trans. J.E. Maraniss. Durham, NC: Duke University Press.

Bergmann, S. and Sager, T. (eds) (2008) *The Ethics of Mobilities: Rethinking Place, Exclusion, Freedom and Environment*. Aldershot: Ashgate.

Bissell, D. (2007) "Animating Suspension: Waiting for Mobilities," *Mobilities*, 2(2): 277–298.

Bissell, D. and Fuller, G. (eds) (2009) "The Revenge of the Still," *M/C Journal*, 12(1). Accessed 01/04/11 at http://journal.media-culture.org.au/index.php/mcjournal/article/viewArticle/136/0

Bryan, A. and Flynn, S. (2002) "*Free Trade, Smart Borders, and Homeland Security: U.S.–Caribbean Cooperation in a New Era of Vulnerability,*" The Dante B. Fascell

North-South Center Working Paper Series, No. 8 (Sept. 2002), accessed 11/1/2010 at http://www.centerfornationalpolicy.org/ht/display/ContentDetails/i/16647
Büscher, M. and Urry, J. (2009) "Mobile Methods and the Empirical," *European Journal of Social Theory*, 12(1): 99–116.
Büscher, M., Urry, J. and Witchger, K. (eds) (2010) *Mobile Methodologies*. London: Routledge.
Cameron, A. and Palan, R. (2004) *The Imagined Economies of Globalization*. London: Sage.
Canzler, W., Kaufmann, V. and Kesselring, S. (eds) (2008) *Tracing Mobilities: Towards a Cosmopolitan Perspective*. Farnham: Ashgate.
Carey, J. (1983) "Technology and Ideology: The Case of the Telegraph," *Prospects*, 8: 303–325.
Clifford, J. (1997) *Routes: Travel and Translation in the Late Twentieth Century*. Cambridge: Harvard University Press.
Codourey, M. (2008) "Mobile Identities, Technology and the Socio-Spatial Relations of Air Travel," *Technoetic Arts*, 6(1 May): 99–111.
Cresswell, T. (2006) *On the Move: Mobility in the Modern Western World*. London: Routledge.
Cunningham, H. and Heyman, J. (2004) "Introduction: Mobilities and Enclosures at Borders," *Identities: Global Studies in Culture and Power*, 11(3): 289–302.
Cwerner, S., Kesselring, S. and Urry, J. (eds) (2009) *Aeromobilities*. London: Routledge.
DeLoughrey, E. (2007) *Routes and Roots*. Honolulu: University of Hawaii Press.
Dodge, M. and Kitchin, R. (2004) "Flying through code/space: the real virtuality of air travel," *Environment and Planning A*, 26 (2): 195–211.
Duval, D. (2002) "The Return Visit-Return Migration Connection," in C.M. Hall and A.M. Williams (eds) *Tourism and Migration*. Dordrecht: Kluwer Academic Publishers, pp. 257–276.
Duval, D. (2004) *Tourism in the Caribbean: Trends, Development, Prospects*. London: Routledge.
Fincham, B., McGuinness, M. and Murray, L. (2010) *Mobile Methodologies*. Aldershot: Ashgate.
Foner, N. (1998) "Towards a Comparative Perspective on Caribbean Migration," in M. Chamberlain (ed.) *Caribbean Migration: Globalised Identities*. London: Routledge, pp. 47–62.
Fuller, G. (2003) "Life in Transit: Between Airport and Camp," *Borderlands (e-journal)*, 2: 1.
Fuller, G. and Harley, R. (2005) *Aviopolis: A Book About Airports*. London: Black Dog Publishing.
Gilroy, P. (1993) *The Black Atlantic: Modernity and Double Consciousness*. London: Verso.
Glissant, E. (1992 [1989]) *Caribbean Discourse*, Trans. J. Michael Dash. Charlottesville, VA: University Press of Virginia.
Glissant, E. (1997) *Poetics of Relation*, Trans. Betsy Wing. Ann Arbor, MI: University of Michigan Press.
Gordon, A. (2008) *Naked Airport: A Cultural History of the World's Most Revolutionary Structure*. Chicago, IL: University of Chicago Press.
Gottdiener, M. (2001) *Life in the Air*. Oxford: Rowman and Littlefield.
Hannam, K., Sheller, M. and Urry, J. (2006) Mobilities, Immobilities, and Moorings. *Mobilities*, 1(1): 1–22.
Hannerz, U. (1996) *Transnational Connections*. London: Routledge.
Henke, H. and Magister, K.H. (eds) (2007) *Constructing Vernacular Culture in the Trans-Caribbean*. Boston: Lexington Books.
Herz, A. (2010) "WikiLeaked Cables Reveal: US Worried About International Criticism of Post-Quake Troop Deployment," *Haïti Liberté*, http://www.haiti-liberte.com/archives/volume4-48/U.S.%20Worried%20about%20International.asp

Heyman, J. (2004) "Ports of Entry as Nodes in the World System," *Identities: Global Studies in Culture and Power*, 11(3): 303–327.
Jaffe, R. (ed.) (2008) *The Caribbean City*. Kingston: Ian Randle and Leiden: KITLV Press.
Kaplan, C. (2006) "Mobility and War: the 'cosmic view' of air power," *Environment and Planning A*, 38 (2): 395–407.
Kaufmann, V. and Montulet, B. (2008) "Between Social and Spatial Mobilities: The Issue of Social Fluidity," in W. Canzler, V. Kaufmann and S. Kesselring (eds) *Tracing Mobilities: Towards a Cosmopolitan Perspective*. Farnham: Ashgate, pp. 37–56.
Kaufmann, V., Bergman, M., and Joye, D. (2004) "Motility: Mobility as Capital," *International Journal of Urban and Regional Research*, 28: 4 (December): 745–756.
Kellerman, A. (2008) "International Airports: Passengers in an Environment of 'Authorities'," *Mobilities*, 3: 161–178.
Klein, R. (2008) *Paradise Lost at Sea: Rethinking Cruise Tourism*. Halifax: Fernwood Publishing Co.
Lassen, C. (2006) "Aeromobility and Work," *Environment and Planning A*, 38(2): 301–312.
Lyon, D. (2008) "Filtering Flows, Friends, and Foes: Global Surveillance," in Mark Salter (ed.) *Politics at the Airport*. Minneapolis, MN: University of Minnesota Press, pp. 29–50.
Packer, J. (2007) "Rethinking Dependency: New Relations of Transportation and Communication," in Packer and Robertson (eds) *Thinking With James Carey: Essays on Communications, Transportation, History*. New York: Peter Lang, pp. 79–100.
Packer, J. (2008) *Mobility without Mayhem: Safety, Cars, and Citizenship*. Durham, NC: Duke University Press.
Packer, J. and Robertson, C. (2007) "Introduction," in Packer and Robertson (eds) *Thinking with James Carey: Essays on Communications, Transportation, History*. New York: Peter Lang, pp. 1–10.
Palan, R. (1998) "Trying to Have Your Cake and Eating It: How and Why the State System Has Created Offshore," *International Studies Quarterly*, 42(4): 625–643.
Pattullo, P. (1996) *Last Resorts: The Cost of Tourism in the Caribbean*. London: Cassell/Latin American Bureau.
Puri, S. (ed.) (2003) *Marginal Migrations: The Circulation of Cultures within the Caribbean*. Oxford: Macmillan Caribbean.
Roberts, S. (1994) "Fictitious Capital, Fictitious Spaces: The Geography of Offshore Financial Flows," in S. Corbridge, R. Martin and N Thrift (eds) *Money Power Space*. Oxford: Blackwell.
Salter, M. (2006) "The Global Visa Regime and the Political Technologies of the International Self: Borders, Bodies, Biopolitics," *Alternatives: Global, Local, Political*, 31(2 April): 167–189.
Salter, M. (ed.) (2008) *Politics at the Airport*. Minneapolis, MN: University of Minnesota Press.
Schiller, N.G. and Fouran, G. (2001) *Georges Woke Up Laughing: Long-Distance Nationalism and the Search for Home*. Durham, NC: Duke University Press.
Sheller, M. (2003) *Consuming the Caribbean*. London: Routledge.
Sheller, M. (2004) "Demobilising and Remobilising the Caribbean," in M. Sheller and J. Urry (eds) *Tourism Mobilities: Places to Play, Places in Play*. London: Routledge, pp. 13–21.
Sheller, M. (2007) "Virtual Islands: Mobilities, Connectivity and the New Caribbean Spatialities," *Small Axe: A Caribbean Journal of Criticism*, 24(October): 16–33.
Sheller, M. (2009a) "Infrastructures of the Imagined Island: Software, Mobilities and the Architecture of Caribbean Paradise," *Environment and Planning A*, 41: 1386–1403.

Sheller, M. (2009b) "The New Caribbean Complexity: Mobility Systems, Tourism and the Re-Scaling Of Development," *Singapore Journal of Tropical Geography*, 30: 189–203.
Sheller, M. (2010) "Air Mobilities on the US–Caribbean Border: Open Skies and Closed Gates," *The Communication Review*, 13(4): 269–288.
Sheller, M. and Urry, J. (eds) (2004) *Tourism Mobilities: Places to Play, Places in Play*. London: Routledge.
Sparke, M. (2006) "A Neoliberal Nexus: Economy, Security and the Biopolitics of Citizenship on the Border," *Political Geography*, 25: 151–180.
Thomas-Hope, E. (1992) *Freedom and Constraint in Caribbean Migration and Diaspora*. Kingston, Jamaica: Ian Randle Publishers.
Urry, J. (2000) *Sociology Beyond Societies: Mobilities for the Twenty-first Century*. London: Routledge.
Urry, J. (2007) *Mobilities*. Cambridge: Polity.
Uteng, T.P. and Cresswell, T. (eds) (2008) *Gendered Mobilities*. Aldershot: Ashgate.
Wood, D. and Graham, S. (2006) Permeable Boundaries in the Software-sorted Society: Surveillance and the Differentiation of Mobility, in M. Sheller and J. Urry (eds) *Mobile Technologies of the City*. London: Routledge.
World Bank Report. (2005) "A Time to Choose: Caribbean Development in the 21st Century," Caribbean Country Management Unit, Poverty Reduction and Economic Management Unit, Latin America and the Caribbean Region, World Bank Report No. 31725-LAC (April 7, 2005). Accessed 11/1/2010 at http://www.worldbank.org/caribcrossroads

Chapter 17

Publicized privacy

Social networking and the compulsive search for limits

John Sloop and Joshua Gunn

Drawing on Michael Hardt and Antonio Negri's (2000) account of the shift from a disciplinary society to the society of control, Jodi Dean offers a provocative explanation of contemporary public behavior (2009, p. 65). Given some of the symptoms of the shift described by Hardt and Negri – a dissolution of the nuclear family, unions, schools, neighborhoods, and the rise of virtualities that create fluid, hybrid, and mobile imaginary identities – Dean finds contemporary subjects who increasingly lack self-control, "in part because they lack a strong sense of self that arises through discipline, and … look outside themselves for some authority to impose control" (ibid., p. 66). In short, as material and cultural changes have effectively lessened the skill/need of individuals to self-discipline, they have a compulsion to seek external control for understanding the limits of behavior and identity.

It is an intriguing thesis, to be sure, one that frightens while simultaneously forcing "we critics" to rethink strategies crafted – at least one chapter – when Foucault's description of the disciplinary society was at its high water mark. As if Foucault's understanding of the cultural condition was not horrific enough, the move toward a society of control puts something of an end to the optimism cultural critics had fantasized as the "age of the Internet" and material changes it wrought. Here instead, Dean's reading of Hardt and Negri would have us understand that, within the grooves of the changes wrought by current material conditions, individual subjects, rather than seeking libratory identity changes on their own – something hinted at by Hardt and Negri – pursue external punishment or control that tells them "how to behave" and, in effect, reinscribe particular behaviors. Identities may be unstable, open for change, but behaviors – at least behaviors important for the persistence of the political economy – remain relatively controlled.

As we collectively investigate this transition – how to explain it and how to critique it – we cannot help but turn to Raymond Williams, not simply because his work on mass media was so influential, but also because it turns out to be so prescient. Toward the end of his *Television: Technology and Cultural Form*, Williams expresses his frustration with the ways in which television – which had progressive cultural potential – had been turned into

a tool controlled by a few corporations. If potential was going to be reworked into the form – if any action was possible – Williams asserted, its conditions were to be "information, analysis, education, discussion … " (1974, p. 152). Given the parallel rise in optimism over changes in media usage over the last several decades, and the accompanying ways in which much of the potential failed to manifest, we see this essay as an attempt to explain the ways changes in media – as material changes in the way people communicate – articulate to changes in culture as one move toward explanation and analysis, as one step toward refiguring the current assemblage, to borrow a Deleuzian term (Deleuze and Guattari, 2000, p. 504),[1] of publicized privacy.[2]

As we work toward an understanding of publicized privacy and its influence within a culture of control, we suggest that this condition – while of course overdetermined – results in large part from material changes in contemporary media/media usage, the ideology and romanticism of "freedom/limits" attached to media usage, and, finally, compulsory habits that encourage us to publicize ourselves while only being vaguely aware of the consequences. As we do with all such explanations in critical studies, we work through this explanation as a way to help us think about ways of refiguring the current cultural condition. This is a small step toward the information, analysis, education, and discussion called for by Raymond Williams.

From mobile privatization to publicized privacy

We turn, then, to Williams' landmark treatise, *Television: Technology and Cultural Form*. Here, Williams set the early ground for cultural critics interested in the ways in which television as a form was altering the relationship between spaces – private and public, mobile, and stationary. Williams, referring to multiple "electric" technologies that arrived somewhat concurrently with television, saw the emergence of an at once mobile and home-centered way of living: "mobile privatization" (1974, p. 26). Broadcast technologies allowed the new mobile work force, "with better material conditions and private homes," a way to have contact privately with the "out there," to encounter the world on their own terms, bringing the outside in (ibid., p. 27). Although Williams was concerned with the way this "mobile privatization" ultimately worked hegemonically, remarking dominant ideology rather than encouraging the production of numerous local value streams, the concept of mobile privatization held firm regardless. Space had materially changed: in private, without physically moving, one was privately mobile, not interacting but living within a larger world while simultaneously sitting still.

Taking off from this model with the advent of smaller, more mobile, television sets, Lynn Spigel (2001) argued that these sets allowed for "privatized mobility," a rather complicated alteration of space. Hence, with a television set which traveled (and certainly we have a more extreme version of this

now), the family's domestic situation could be literally mobile while maintaining its same relationship to the external world. Televised mobility allowed "family and domesticity together even while people were on the go" (ibid., p. 121). Spigel was careful to note, however, that she was not solely discussing the material affects of the "travelling television." Unlike today, for example, when it is far easier to move through space with mobile media (DVD players in cars, smart phones, iPads, etc.), Spigel argued that even when people were not moving with their sets – as many were not – the existence of the sets and the discourse around them together created a sense of privatized mobility. We travel, alone or as a group, with the sense of our own access to mediation. As Baudrillard would have it, "to each his own bubble, that is the law today" (1988, p.39).

Following this line of thinking, we introduce "publicized privacy" to indicate one manifestation of control society and to place it firmly within the grasps of a media theory that understands the relationship between mediation and culture as one that is overdetermined with material, ideological, and psychical underpinnings. In terms of the material, along with a long line of theorists and critics who are concerned with the relationship between mediation and body (including supporters and detractors of McLuhan's position), we argue that any use of media has a material alteration of the body, its movement, and our understanding of the body and the world. Hence, when we concern ourselves with technologies that "move" the body and/or become "part of" the body, the materiality itself must be one aspect of the change. As a result, mobile media and mobility alter the material abilities/senses of the body and, combined with other factors (*the necessary clause to escape charges of determinism*), encourage particular changes in identity and meaning.

Like "old" media, the mobile character of new technological interface makes the relationship between mobility theory and media studies all the more relevant. Although a medium like television brought the outside in, the grounded television set encouraged the body to be stationary while engaged with the medium; television may have worked to mobilize the outside, but the viewer was stationary while engaged with the medium. Mobility worked only in terms of moving a world to the viewer, not allowing the viewer to be mobilized and not allowing the viewer to mobilize a response. Smart phones, for example, not only encourage interactive communication of a variety of sorts, but also given their mobility and vast uses, become metaphorically a permanent prosthetic. In a recent essay on mobile technologies, Hashimoto and Campbell suggest that the gap between self and thing is reduced on both a material and cultural level to such a degree that "it can now be assumed that in certain situations, being toward others and things has become ontologically indistinguishable" (2008, p. 547).

Echoing claims made separately by Marshall McLuhan (1964) and John Peters (2001), among others, John Urry (2007) suggests that ultimately the biological sciences are based on the ideal of individual perfectibility, and

hence logically encourage the development of enhancements that would ultimately conclude in a transcendence of the individual him/herself (ibid., p. 46). The cultural influence of this alteration is varied and multiple, but it bears impact on the phenomenon we are discussing here. When Urry argues that new media of this type create a "mobile citizenship" that undermines the nation-state to the degree that one's sense of geographic spaces has been altered (ibid., p. 189) or when Hardt and Negri see a disintegration of the nation state's hold on individual identities, each points toward, or assumes, the materiality of the changes wrought by new mobile technologies. Moreover, regardless of the cultural interface, it is not only the identity of the individual that changes (less tied to nationalism, less tied to rationality, less tied to delay, more tied to immediate interests, and emotionality) but also the ways this individual communicates. If we see, as many have, the high era of print culture as one of rationality, of distanced reason, the oncoming epistemology of mobile media portends a human subject unhinged from permanence, able to communicate when she/he wants, where one wants. As a result, as Jodi Dean (2009) observes, without the solid constraints found in modernity and with the material changes in media, the individual expresses what would have been private thoughts publicly, emotions immediately (ibid., pp. 66–67).

In addition to the ways that material alterations to the body have encouraged changes in epistemology, these alterations are taking place within a dominant discourse that is associated with, and articulated around, all types of mobility.[3] From the discourses concerning the freedom of the open road and of all modes of physical transportation to discourses that have associated computer technologies (especially the Internet) with freedom (to get what one wants, to be who one wants, to have access to information one wants, and to see friends when one wants), the idea of movement as a form of freedom is closely articulated. Even the fears associated with such freedom (e.g., the dangerous hitchhiker, the online predator, and the consequences of sharing too much information) are all downsides that emphasize freedom; in this case, freedom gone too far.

In particular, this ideology of freedom has been associated with political freedom. As Jeremy Packer (2008) points out, this freedom is not solely for those in power but is also articulated around those on the margins, on the outsides of institutional power. For example, Lynn Spigel (2001) argues that mobile television sets were advertised early on as having a portability that could be associated with the women's movement (pp. 126, 128). Tim Cresswell (2006, p. 199) and Virginia Scharff (1991) separately highlighted the ways the women's suffrage movement utilized automobiles as a sign of political freedom for women, with, for example, Margaret Foley touring in a car to illustrate movement as a sign of her freedom.

More recently, Hashimoto and Campbell (2008) analyzed the ways mobile technologies have increased the ways individuals fantasize their connections to each other, to the social whole, and to other spaces/places.

Hashimoto and Campbell stress the same material/ideological double impact we stress in this essay. While technologies enter a world in which ideology encourages subjects to envision the movement of the individual through ethereal spaces and changing subjectivities (and to see this as a right), they also (and consequently) work to encourage people to utilize prosthetics to make the world increasingly mobile. In the United States, at least, the ideology concerning mobile communication and social networking coincides with the ideology encouraged by these same technologies. Material and ideological "encouragement" work hand in hand.

Additionally, this ideology of freedom is articulated so strongly that, as Tim Cresswell illustrates in his readings of US law, the notion of mobility as a right, as "intertwined with the very notion of what it is to be a national citizen," is not only assumed in public ideology but is also coded into law (2008, p. 151). Cresswell (2006) argues that mobility is so strongly and romantically tied to citizenship that there is a degree to which to be denied mobility is to be denied citizenship altogether (e.g., the ways in which immigrants and tramps are detained or informally cordoned off; pp. 151–167). After working through a series of legal statutes, Cresswell concludes that the ability to move at will is so assumed in US discourse that "this interconnection between the human body and the wider world signals the arrival of the prosthetic-subject-citizen. To be a subject is to be linked and to have an ideology of freedom in one's movement" (2006, p. 217).

Ultimately, social networking has entered – or is a part of – an assemblage in which its use as a tool to enable the subject to extend in space and time is encouraged both by the technology itself and by the cultural ideology through which it is understood. When we combine the altered materiality of the body and the ideology of freedom with habitual compulsion, we have a calculus proper for the publication of privacy.

It would be difficult to argue that a public panic has not arisen over the mix of cell phone use and automobile driving; however, it would be equally difficult to find evidence that the panic is causing much of a difference, or at least a decline, in the number of people talking while driving or texting while driving. Although the warnings associated with the anti-text message while driving discourse certainly act as a critique or caution to the "mobility as freedom" nexus, there is something to be seen in the fact that, even with these warnings in hand, the narrative implies (and many of us can acknowledge) that there is a compulsion toward texting, toward the use of the cell phone, that goes beyond our desire for safety. Like many activities that bring us pleasure, there are constant warnings that the freedom of the activity is riddled with danger, an enjoyable danger that the compulsion takes us beyond.

The policing of texting while driving narratives is instructive to the degree that it helps us see better the ways that fantasies of freedom and the prosthetic character of media come together to tap into our tendencies to develop compulsory habits. Indeed, who among us does not understand the

feeling of freedom and compulsion involved in digital interactivity? While reading and writing this chapter, both the authors and many readers will check their email multiple times; during conference panels, we have seen panelists update their Facebook status during other panelists' presentations and during the Q/A session; many of us have either watched a conversational partner "mindlessly" check email and/or have checked our own during that same conversation. And while a larger percentage of us actively take these actions, there is a simultaneous cultural understanding that these activities are "a waste of time." Fun or not, these actions are said to get in the way of more productive labor (or in place of "real" relationships), and yet we continue to partake precisely because the actions not only bring pleasure but also a sense of release; we feel a compulsion to move from a situation that brings either labor, pressure, or boredom to a situation of pleasure.

Because texting has become a dominant means of communication among youth, research has begun to explore – or construct – the notion of the addictive nature of text messaging and other forms of communicative mobility. Indeed, there has been a movement to include the category "Internet Addiction" in the forthcoming edition of the DSM-V, the dominant manual for psychological disorders (Block, 2008). Although there are multiple scientific explanations for compulsory communicative behaviors, most would suggest that an experience of pleasure does not on its own explain the habitual behavior, especially when the warnings of the downside are so fatal. Just as Freud once observed (1961) that there are aspects of ritualized behavior that go "beyond the pleasure principle," Jodi Dean argues that such behaviors are attractive, in part, because they bring pleasure *and* invite punishment: "Contemporary subjects increasingly lack self-control, in part because they lack a strong sense of self that arises through discipline and … look outside themselves for some authority to impose control" (2009, p. 66). From a Lacanian perspective, Dean is pointing here to the demise of disciplinary society's paternal figure (see Gunn and Frentz, 2010). While the subject needs, indeed desires, a sense of self, now each must seek it out rather than having a pre-established, teaching of self-discipline. Part of this sense of the subject's self, we suggest, comes from those actions and controls which force an understanding of the limits of public and private, of privacy and publicity. Consequently, the compulsory habits that orbit social networking and the ideology accompanying it can be read as unconscious attempts to discern the limits of autonomy and the locus of the private self.

In summary, in addition to the material changes encouraged by technological prosthetics and the ways we think about social networking through the ideology of freedom, we are suggesting that our interactions with social networking play out in increasingly compulsory habits. Furthermore, as Hashimoto and Campbell observe, technologies such as cell phones create a sense of space that "is a product of fantasies of pure communication, and of the other being present now, without any of the distances and difficulties enhanced by discerning vision" (2008, p. 546). These fantasies, reinforced

and remarked in our persistent performance and habitual routines, further contribute to an expectation of perpetual contact, albeit contact with those we have chosen. In other words, not only are we compulsively drawn toward continual communication and publicity by habit, but also by participating in a network, we demand the same of others, we anticipate the same by others. We seem to be unwittingly compelling each other into habits of miscalculated – if not disastrously distracted – intimacy.

Convenient publicity

Thus far we are suggesting that social networking has entered an imaginary space in which its use as a tool to enable the subject to be extended in space and time is encouraged, both materially and via the cultural ideology through which it is understood. When we combine the altered materiality of the body, the ideology of freedom, and compulsive usage, we have a calculus proper for the publication of the private.

Relying in large part on Jacques Rancière, in his recent book, *The Political Life of Sensation*, Davide Panagia argues that politics "is an activity of recognition of that which is given to the sensible" (2009, p. 6). In a series of what can best be described as genealogical case studies, Panagia probes the ways politics is a perceptual practice and, significantly, urges us to think through some of the ways that some "events" or images can disrupt the senses, upsetting politics of the norm. Reading Rancière (1998) through Attali (1985) on this one point, we might say that the interest for Panagia concerns those moments of hegemonic incoherence represented by "noise" within the parameters of music as Panagia observes, democracy in action is "first and foremost a politics of noise" (2009, p. 48).

Panagia's case studies cover multiple moments in which the world assumed becomes the world rethought, moments when what we see, hear, smell, and feel outside the bounds of our perceptual expectations. Panagia refers to these as moments of "advenience," (pp. 150–153). It is in such moments, he claims, that we have the greatest opportunity to disrupt assumed meanings, to fracture dominant understandings of the world.

Relevant to the argument of this chapter, the merging of new media prosthetics, the ideology of "freedom," and compulsive usage creates a condition that favors the convenient (rather than advenient) expression of temporary emotions to a public, which reads them as permanent or as part of one's identity. These moments of convenience encourage the expression of attitudes that provide the "speaker" with a sensation of "freedom" while simultaneously placing their comments in the realm of public discipline or, rather, control. What one experiences as a "pure" expression of private emotions in a kind of familiar or intimate domesticity nevertheless leaves one exposed to ideological and material confrontation (in a word, to "control").

Again, any cursory review of contemporary scholarship concerning digital mobilities would find a repetition of a claim that contemporary culture has moved from a Foucault-described society of "self-discipline" to one of a more Deleuzian culture of "intelligent control." In the final chapter of *Mobility without Mayhem*, Jeremy Packer (2008) argues that we see this shift in emphasis in the ideological "dreams" of error-free automobiles, automobiles which are controlled digitally, driver free, and to remain at a safe distance from each other. Rather than a society in which individuals must train themselves to be more careful drivers, Packer sees a transition to a system in which the individual citizen/subject has less need for self-monitoring, self-control in one sense and therefore more time and energy on production, especially as more and more spaces are reterritorialized as work spaces (ibid., pp. 270, 282).

On this point, Urry (2007) agrees, suggesting that from the increasing use of novel systems of monitoring, surveillance, and regulation of bodies in airports to the surveillance allowed by mobile media, there is now less of a need for a society of discipline as we transition to a society of control.[4] Urry succinctly puts it this way: "not only are people, machines and places on the move … but so too are the means of tracking, ordering and governing that are increasingly detached from specific locations and which may well engender a dark future" (ibid., p. 270). These arguments, and those of Dean cited above, certainly work hand in hand with our argument that not only do we see a move to a culture of control, but also this move – and the seemingly individual desire or compulsion toward publicized privacy – is overdetermined.

Part of what we hope to draw attention to is the ways this shift to a culture of control – at least in terms of publicized privacy – is particularly menacing, especially in terms of the relations between the "individual" and his/her sense of culture as a whole. We have argued that the contemporary logics of social networking advance a kind of phantom domesticity – a feeling of the safety and freedom of privacy. In the move toward a society of control, then, we are encouraged to forget the various ways in which norms of decorum and propriety are enforced until, of course, the moment of discipline. We have also suggested that the material changes that accompany "new" media prosthetics, the sensation of freedom attached to mobility and articulated to an ideology of omnipotence, and the habits of genre, collectively, overdetermine a form of disciplinary amnesia through the misdirection of a publicized privacy.

This cultural shift toward publicized privacy, at least implicitly, invites each of us to behave as if our tactics of everyday life go unseen (indeed, as if we are walking around the house in our underwear). In this sense, Rancière's (1998) concern with the social motto of power, "there is nothing to be seen here," works hand in hand with an ideology that tells the citizen that, "there is no way to be seen here" while keeping him or her under control; not self-discipline but cultural control of actively undisciplined behavior. It may *feel* at times as if we are in the living room or pub, but in

today's economic environment, we are instead always at work – and yet we forget.

Conclusion: toward analysis, information, education, and discussion

In a general sense, we find ourselves in a familiar situation as we move toward a conclusion. We assume, and we realize there is little controversial or novel in this assumption, that subjectivity and agency are overdetermined, never complete, and always in a state of being remarked publicly, by others, and by ourselves. Moreover, when we examine the performance of self in the public sphere of online social networks, we see that subjects are encouraged to express immediate thoughts or emotions through a combination of material, ideological, and psychological factors. Further, we have expressed our worry that the sensational pleasures associated with such communication, the immediate ecstasy of expression that comes from the breaking of "rules and rule making" (Panagia, 2009, pp. 29–31), ultimately offers little for the individual other than to place themselves open for a moment of control.

Whether self-discipline or cultural control, the task for theorists and critics perhaps remains the same. Outside of offering an admittedly limited and incomplete "explanation," where do we take such an inquiry? Returning to the conclusion of Raymond Williams's *Television: Technology and Cultural Form*: when action is necessary, its conditions are analysis, information, education, and discussion. A discussion of the limits of "privatized publicity" brings noise to the ways in which we talk and approach our social networking, cautions about the metaphors we deploy that encourage us to see a public forum as a private space of communication.

Williams, we recall, observed that television, and televisual devices, act as the "contemporary tools of the long revolution toward an educated and participatory democracy, and of the recovery of effective communication in complex and urban and industrial societies" (1974, p. 151). Nonetheless, he warned these could also act as the tools of a "counter-revolution" in which, under the cover to talk about choice

> … a few para-national corporations, with their attendant states and agencies, could rather reach into our lives, at every level from news to psycho-drama, until individual and collective responses to many different kinds of experience and problems became almost limited to choice between their programmed possibilities
>
> (Ibid., pp. 151–152)

Of course, the conditions today differ, and while we do not wish to point to corporations as agents, we do want to suggest that while interactive sites and social networking in general could indeed operate as places from which

the "multitude" emerges (Hardt and Negri, 2005), they could just as easily become – under the cover of a discourse of freedom and expression – the locale by which meanings, behaviors, and actions are "held in place," as publicized privacy marks one as open and ready for discipline.

While Panagia may well be correct in asserting that democratic politics is "first and foremost a politics of noise" (ibid., p. 42), he sidesteps one productive site of emergence for such noise. Productive noise should not be expected in moments of immediacy, of aesthetic sensation or pleasure, that leads to a disruption of rules and rule following. Instead, it is in the moments afterward, those moments where rules have been broken and discipline has followed, with "proper ideology" reinscribed, that we critics must place our focus, must highlight the ways in which the offer of "freedom," of free expression, is always already illusory. While we have little influence to alter the material changes reviewed here, we can be a part of the process of questioning the ideological. These are the locations where we must make noise that opens ears and eyes to other possibilities.

Notes

1 Our basic understanding of this usage of assemblage derives from Manuel DeLanda's (2006). *A new philosophy of society*. We are to refer to the temporary and precarious coherence of meanings that make up political and cultural realities at any given moment.
2 The argument in this chapter runs along the same lines as, and overlaps with, an argument we have made elsewhere. See John M. Sloop and Joshua Gunn, "Status Control: On the Publicized Privacy of Social Networking," *Communication Review* (2010).
3 Here we find ourselves in that problematic section of all arguments dealing with media: the "We're not media determinists" moment. Nonetheless, we want to be clear that we see the material changes wrought by new media as the primary agent of change. Indeed, even the "ideological" changes we discuss here, and the compulsion we discuss below, are bound up with alterations in material mediation.
4 Similarly, Hashimoto and Campbell (2008, p. 547) have recently argued that while discourse and mobile media as prosthetic (the material and the ideology) work together to give one the illusion of freedom and the fantasy of spacelessness, it is the fact that mobile position allows everyone to be located based on the location of their phones (their GPSs), their chips, that give the lie to this illusion. In short, like Packer, they are concerned with a shift from self-control and self-discipline to a shift in emphasis to locateability that we forget.

References

Attali, J, 1985. *Noise: The political economy of music*, Trans. B. Massumi, University of Minnesota Press, Minneapolis, MN.
Baudrillard, J, 1988. *The ecstasy of communication*, Trans. Bernard and Caroline Schulze, Semiotext(e), New York.
Block, JJ, 2008. "Issues for DSM-V: Internet addiction," *American Journal of Psychiatry*, 165, 306–307.
Cresswell, T, 2006. *On the move: Mobility in the modern western world*, Routledge, New York.

Dean, J, 2009. *Democracy and other neoliberal fantasies: Communicative capitalism and left politics*, Duke University Press, Durham, NC.
deCerteau, M, 2002. *The practice of everyday life*, University of California Press, Berkeley, CA.
DeLanda, M, 2006. *A new philosophy of society: Assemblage theory and social complexity*, Continuum Press, New York.
Deleuze, G and F Guattari, 2000. *A thousand plateaus*, Athlone Press, London.
Freud, S, 1961. *Beyond the pleasure principle*, WW Norton & Company, New York.
Gates, B, N Myhrvold, and P Rinearson, 1996. *The road ahead: Completely revised and up-to-date*, Penguin, New York.
Gunn, J and TS Frentz, 2010. "Fighting for father: Fight Club as cinematic psychosis," *Western Journal of Communication*, 74, 269–291.
Hardt, M and A Negri, 2000. *Empire*, Harvard University Press, Cambridge.
Hardt, M and A Negri, 2005. *Multitude: War and democracy in the age of empire*, Penguin, New York.
Hashimoto, SD and SW Campbell, 2008. The occupation of ethereal locations: Indications of mobile data, *Critical Studies in Media Communication*, 25, 537–558.
McLuhan, M, 1964. *Understanding media: The extensions of man*, Random House, New York.
Packer, J, 2008. *Mobility without Mayhem: Safety, cars, and citizenship*, Duke University Press, Durham, NC.
Panagia, D, 2009. *The political life of sensation*, Duke University Press, Durham, NC.
Peters, J, 2001. *Speaking into the air: A history of the idea of communication*, University of Chicago Press, Chicago, IL.
Rancière, J, 1998. *Dis-agreement: Politics and philosophy*, Trans. Julie Rose, University of Minnesota Press, Minneapolis, MN.
Scharff, V, 1991. *Taking the wheel: Women and the coming of the motor age*, Free Press, New York.
Sloop, J and J Gunn, 2010. "Status control: An admonition concerning the publicized privacy of social networking," *The Communication Review*, 13, 289–308.
Spigel, L, 2001. *Welcome to the dreamhouse: Popular media and postwar suburbs*, Duke University Press, Durham, NC.
Urry, J, 2007. *Mobilities*, Polity Press, Malden, MA.
Williams, R, 1974. *Television: Technology and cultural form*, Shocken Books, New York.

Chapter 18

Virtual mobility

The sign/body of pure information

Ken Hillis

To speak about mobility of necessity means speaking about space – whether the material spaces of the actual world through which we move and negotiate daily life, or, increasingly, those Web-based virtual spaces through which we feel we navigate, visit, or flow when online. It is also the case that any form of mobility or materiality that is not understood as an extension in space is very difficult to imagine or write about. In order to live, human beings need to interpret the world through and in relationship to a series of fixed and moving objects. We see the material before we see the cultural. This is reflected in the reliance on spatial metaphors to situate Web practices – "sites," "under construction," "browsing," "visit," Active *Worlds*, My*Space*, Net*scape*, and so on. These spatial metaphors and the sense of affective materiality to which they point also speak to a new discursive positioning of active digital subjectivity, one connected to a 3-D spatialized sense of *doing* resonant with, while also repositioning, Hannah Arendt's concept of *homo faber*. To speak about online mobility is to implicitly suggest that one buys into the idea that virtual space is sufficiently extensive and equivalent to material space so that one might achieve something akin to geographic and social mobility within it.

The naturalized assumption that the Web constitutes a form of space coupled to the increasing ubiquity of online virtual environments reflects the rise of a Neoplatonic techno-metaphysics. It is driven, in part, by telepresence, the experience, and simulation of presence achieved through the use of a communications technology. The sense of online telepresence has increased with bandwidth and the development of a range of techniques, practices and sites that involve the transmission of moving images and representations of self and others. Telepresence is part of a wider resurgence of a techno-metaphysics that attempts to realize, through digital settings and the virtual spaces they establish, a synthesis of appearance and presence, of the ideal and the materially real – a synthesis of, on the one hand, online settings for the performance of the ideal of a disembodied, cosmopolitan, and mobile self that many networked neoliberal individuals intuit that they should be or become, and, on the other hand, the reality of their fleshy

bodies sitting in front of screens. From a material standpoint, they are not going anywhere at all, yet this dynamic allows essentially stationary individuals to experience certain qualities of mobility, the sense of making a journey, without requiring them to leave the room, or become ambulatory. At a moment of great support for the idea of mobility as a major resource of contemporary life, the online moving image pulls us along in its tow, catching us in a tension between material fixity and digital flow.

My discussion of mobility as it applies to the virtual spaces of Web-based communication media draws from my recent enquiry (Hillis 2009) into forms of online signification and their relationship to digital practices of ritual and fetishism. In that interdisciplinary work I explored the relationships between individual users' perceptual experience of a digital materiality and specific forms of indexical, signifying practices manifested in online settings. Drawing from different schools of thought, I examined two networked communication technologies that induce the experience of telepresence: avatar-driven graphical chat environments (also known as MUVEs or multiuser virtual environments)[1] and the sites of personal webcamera operators.[2] Both digital avatars and the moving images of webcam operators are what I term sign/bodies, in brief, a synthesis for online settings of specific aspects of Charles Sanders Peirce's semiotics, particularly his theorization of the index as a sign that remains in direct connection with its object;[3] Jacques Derrida's (1976) reformulation of Peirce's early semiotics in his notion of the trace; and Gilles Deleuze's discussion (1986), developed with particular reference to the cinema, of the movement-image. For Deleuze, the image's ability to move confers on it a quality of immanence that allows viewers to perceive that the movement-image and matter are identical (ibid.: 56). The movement-image, therefore, allows us to understand how cinema bridges the gap between ideology (and therefore meaning) and a viewer's embodied (and therefore material) perception. The online digital sign/body operates in a related fashion.[4]

I understand the online *moving* image of a body or object as a special kind of sign. It is a hybrid form that points directly, in Peircian fashion, to those online forms of signification mounted by Web participants whose practices and techniques reveal the broader project of using the Web to collapse the binary that Deleuze identifies; that is, to render the Web as both the realm of the image and consciousness as well as that of space and movement, and thereby to reconnect consciousness to the thing or object itself. For the purposes of this essay, then, the sign/body operates as a vehicle by which a trace or some remaining fragment of the original body *seems* to be present, through technologies of transmission, to distant others. Like the Peircian index, the online sign/body points directly to the individual remaining on this side of the screen. The sign/body's force in so doing, therefore, crucially depends not only on the increasing centrality of digital settings as sites for the production of meaning but also on its increasing ability to *move* on the screen, to appear *lively* within meaningful virtual spaces that

reference, through different aesthetic forms, aspects of material space this side of the screen.

The idea that online moving images transmit to human sensation an experiential trace of the actual individuals they represent strongly articulates to the dynamic of telepresence. There is, in the perception that the Web-based index or trace carries something essential about the individual, the implicit understanding that the Web also carries us, gives us greater mobility, that we are more present on the Web *through* the form of our own animated sign/bodies than instrumental understandings of telepresence as merely an efficient form of electronic communication would suggest. The idea of telepresence, at least, retains the prefix tele – "at a distance" – as part of its explanatory power. I note here the connection to magic, which, like telepresence, can be broadly defined as "action at a distance," thus underscoring the techno-metaphysical desires that are inherent to these technologies. Nevertheless, under acknowledged perceptual dynamics strongly inflected by capitalized desires increasingly dispense with the idea of the *tele* to move directly to implicit assumptions grounded in indexicality about actual spaces peopled by "something" resembling actual human bodies.

As Deleuze notes, cinema as a technology renders image equal to movement, and it erases the psychological distinctions between the image as an experiential reality and movement as a physical reality. In Web settings, enter the moving image in the form of an index/digital trace/movement-image – a sign/body – and its ability to suggest to human sensory faculties some remaining fragment of the individual it represents or contiguity with this individual. Deleuze's theorization of the ways that moving images hail perception autonomically is confirmed by recent brain science research. H. Henrik Ehrsson reports that it is possible to determine the experience of embodiment through "visual perspective in conjunction with correlated multi-sensory information from the body" (2007: 1048). To induce the sensation of out-of-body experience in subjects, Ehrsson had them wear Virtual Reality head-mounted displays that transmitted images of the subjects recorded from behind. The display prevented the individuals from seeing any other spatial representation or image of themselves in virtual space. Ehrsson then pressed the tip of a rod against the subjects' chests while also holding a different rod in front of the camera behind them. These combined actions had the effect of making it seem to the subjects as if the virtual individual viewed from behind was also being poked in the chest. Subjects reported perceiving their chests being probed, yet they also sensed that it was the virtual individual lodged within the display (in other words, a moving image, or sign) that was also being touched by the rod. In a second experiment Bigna Lenggenhager *et al*. (2007) demonstrated that the sight of a humanlike figure, such as an avatar in virtual space, combined with actually stroking the subject's body, was able to induce an experience of relocating the subject's sense of self away from his or her body's location in actual space.

While Deleuze's philosophy and the brain science research just noted rely on very different approaches and methods, they complement one another through their parallel conclusions that the viewing of a moving image of an object, thing, or event located in virtual space has the potential to authorize the perception of experiential access to a trace of the referent. The dynamics of signification further suggest to human perception that the moving sign/body articulates metonymically to the thing it stands for and points toward: that is to say, toward the human body of its operator or referent. This point about the indexical trace, with its implication of cause and effect, is crucial. While the indexical sign/body is clearly a representation, I am arguing that it is not sensed, autonomically, or psychically, as such by those who consume it in graphical chat/MUVE environments such as Second Life or through accessing personal webcam sites. The autonomic reception of the moving image, which operates as if it were a trace of an actual human being located elsewhere, parallels and supports the psychic desire to receive this image in the same way – that is, as if it were a transmogrification that could render actually present the distant individual it represents. In such a way do individuals located in one place in front of the screen achieve, through a combination of digitally induced sensation and culturally induced desire, both an experience of spatial mobility so prized by contemporary capitalized cultural formations and the sense that these individuals may all gather, as in traditional group ritual formations, in one collective virtual space without ever needing to move from their individual discrete locations.

A concrete example may serve to further explain the rise of this development. In 2007, I attended a workshop on research issues and Second Life. Several teachers gave presentations on their experiences using Second Life as an educational platform, one of whom recounted how she had resolved a disciplinary issue in her online classroom populated by avatars of students and herself. During the first week of class, a student, in the form of his avatar, produced a pop gun and fired it at the teacher in the "presence" of the other students. According to the teacher, the gun was only a "play" gun that fired a flag-like projectile with a virtual dart at its end. The projectile, however, hit the teacher's avatar. Realizing the importance of quickly reestablishing her authority, the teacher, a code-savvy individual versed in the arts of authoring MUVE-based virtual objects, launched a program during the next class period that caused the offending student's avatar to burst into flames and disappear. Students, including the one made to disappear, were impressed, the teacher gained considerable credibility, and discipline was restored.

In responding to this account, another workshop participant stated that at her university such an incident would have led to the teacher's dismissal from her job as well as the student's suspension. I interjected to ask her why that would be the case. My question, posed after the April 2007 Virginia Tech mass shootings, had less to do with the inappropriate actions of the student and the possibly rash response of the teacher. Rather, I hoped to

provoke discussion about the nature of representation in MUVE settings. I continued by asking if a university normally would discipline a representation. To contextualize my question, I noted that many researchers in attendance had already discussed the difficulties of gaining Institutional Review Board (IRB) approval for research conducted in Second Life. This research, mostly online ethnography, entailed interviews conducted "in world" with individuals and groups in the form of their avatars. Why, again, I asked, noting the parallel with the university that would suspend the student and fire the teacher for engaging in virtual classroom warfare, would such research require IRB approval if what was under investigation (and therefore possibly in need of protection) was understood to involve only a set of representations? I answered my own question by suggesting that a plausible explanation lay in understanding that IRBs already implicitly buy into the understanding that sites such as Second Life are no longer only media forms per se; rather, because they allow for indexical experiences of traces of human beings, such sites are increasingly positioned as seemingly actual spaces in which aspects of actual humans have come to reside. Such a development far exceeds the powers generally accorded by modernity to forms of representation. Instead, it reveals the evolution of the machine world of images as an abstract, sovereign, and ultimately desirable post-representational force into which aspects of human beings can somehow relocate. IRB officials, I argued, are already treating the avatar as a bodily appendage-cum-psychic extension and therefore as an actual (if not quite material) part of the person needing protection. Such a development was anticipated by Guy Debord when he argued that "for one to whom the real world becomes real images, mere images are transformed into real beings" (1994: 17). Within this machine-dependent virtual world, appearance – the images themselves and the meanings they carry – takes command; the mobile, telepresent sign/body stands in for actual/material presence. The forms of public discourse this world supports lend credence to workshop members' concern to obtain IRB approval. In such combinatory ways the contemporary moving image has become a post-Debordian form of social relation with which we must all increasingly reckon.

I have offered a few ideas about the relationships among mobility, animated sign/bodies, and individuals' experience of copresence in virtual space based on the indexicality of these sign/bodies. I now want to discuss the sign/body as a form of visual allegory. As Victoria Nelson has observed, "the Web is above all a medium uniquely suited to the ancient mode of allegory, a capability dramatically evident in the ubiquitous fantasy role-playing narratives" (2001: 201). Erik Davis could be discussing Second Life when he identifies computer gaming's "first person allegory" structure within which gamers "wander through a rigorously structured dreamlike landscape patched together from phantasms" (1998: 212–13). I use allegory in the sense of it being the "description of a subject under the guise of some other subject of aptly suggestive resemblance … in which properties and

substances attributed to the apparent subject really refer to the subject they are meant to suggest" [Oxford English Dictionary (OED)]. Allegory, moreover, is also "the aesthetic device of Personification" (Nelson 2001: 202). In literary terms, then, allegory is a form of extended metaphor through which materiality, in the form of objects, actions, and individuals, is rendered *equivalent* with meanings lying beyond the narrative itself (Holman and Harmon 1992: 11). One of the most famous literary allegories is Bunyan's *Pilgrim's Progress* (1678), a tale of Christian salvation; Pablo Picasso's *Guernica* (1937) operates as a visual allegory for the evil of fascism and the horrors of war. Whether deployed this side of the interface, as an avatar in a virtual world, or the visible image of a gay/queer webcam operator living aspects of his daily life in front of the camera, allegory is a figural device serving as a means of simulating the possible – a means by which what remains potential is given imaginative yet figural embodiment so that this figure then may *seem* to be probable or to actualize. Experientially, this state of potential may then seem to have a chance of transforming, of becoming actual. An allegory, then, is a structure or figure of seeming. When coupled with the powers of online telepresence, it is an ideal vehicle for imaginative relocation to the middle ground of virtual environments with their sensational indexicality and thereby seemingly empirical abilities to render equivalence between the imaginary and the actual.

In online MUVEs like Second Life, the avatar is an allegorical figure that indicates a widespread, implicit desire for a form of virtual embodiment that nevertheless could somehow still retain and transmit qualities of the material referent. Avatars allegorize material human bodies as flexible forms of awareness fully capable of becoming information itself. As forms of visual allegory reliant on the dynamics of telepresence discussed above, digital avatars constitute a set of playful, graphically accessible, emotionally believable instructions; they are, drawing from the OED, an "aptly suggestive resemblance" and "figures of some other thing mystically signified by them." Digital avatars, then, can also be thought of as indexical automata through which networked participants perform both the metaphysically inflected expectation to personify themselves through telepresence and the associated real world demand that they take on the incorporeal qualities of indirectness and spatial exchangeability increasingly required for satisfying the capitalized expectation for mobility and being in more than one place at a time.

The central trope of allegory is the figure of the traveler who "on [her or] his journey … is plausibly let into numerous fresh situations where it seems likely that *new aspects* of him or herself may be turned up" (Fletcher 1964: 34–37; emphasis added). The customized gestures of the avatar – who may be shorter, taller, thinner, more buxom or less tanned than one's own material body – allegorize "new aspects" of contemporary and more mobile individual formations. Digital avatars indicate an aestheticized revitalization of the belief that signs, especially moving images such as the online sign/body of the avatar or webcam operator, are already alive with the energy to which

they point as simulations. To apply Neoplatonic logic, all that remains is for humans to accord such sign/bodies the agency that they already seem to possess. While these sign/bodies point to the living bodies of participants as the "true" or "real" residents of the Web, they equally point to digital networks not just as "efficient" forms of communication technologies but as meaningful settings for "new aspects" of the social and life itself.

For Second Life participants seated before their screens, who are at least incipiently aware of the unequal distribution of material mobility, the avatar as allegory meaningfully expresses desire for greater mobility. This desire is seemingly satisfied, if only temporarily (for the virtual never becomes actualized), though inherently metaphysical forms of identification with online sign/bodies also coupled to a dialectal disaffection with a material sense of remaining immobile. Thus MUVEs in general can be viewed as a depiction of the discourse and simulation of mobility, and participation in these virtual worlds (a participation demanding considerable time) works to ritualize the increasingly monetized fetishization of mobility. Such participation, however, is also deeply ironic. For it also points to how the sense of remaining immobile – home alone, insufficiently monetized – articulates to a regressive discourse emphasizing the purported limits of embodiment. In such a way do sign/bodies on the Web also point to the absence of what they unwittingly point directly toward – the absence of, or at least unequal access to, sufficient embodied mobility and acceptable offline forms of transcendence rooted in immanence on the part of many MUVE participants and webcam fans. The avatar, then, further allegorizes capital's interests in encouraging producers and consumers to believe that their real interests always lie formally elsewhere – within the screen-deep space of flows that subjects may only enter as telepresent, mobile sign/bodies.

The avatar participates in a long history of belief that the inanimate can be animated – a history that runs from the statues of Ancient Greek theater that were believed to have the power to move, to *The Sandman* (1816), E.T.A. Hoffmann's account of Olympia, a daughter as mechanical being, to the Talking Turk figures of yesteryear's carnivals, midways, and funhouses. These are all vehicles by which individuals have sought and continue to seek to animate the inanimate and thereby retain a place for spirit in mechanism in an otherwise disenchanted and numb world of dead objects, organized religion and, for many, its exhausted rituals. To dismiss such practices as naïve *per se* fails to adequately consider how the implicit, even ineffable, beliefs they reflect continue to manifest in new forms of digital affectivity and that for such believers the Web increasingly constitutes a transcendental signifier in itself, a post-representational ur-automaton come to life as the psychic appendage for all who use it as a means to seek a unity between meaning and materiality. Fabricating virtual places and objects, sign/bodies included, allegorizes a broader cultural resurfacing of the implicit, as of yet largely unspoken, belief that certain sign forms are alive. In many ways, moreover, the avatar conforms to the ancient logic of puppetry as a practice.

Let the puppet tell you what it wants to do. The avatar, in ritual fashion, is the new educator; and although it is designed, and therefore, by a certain logic inferior to its designer, it nevertheless shows and tells MUVE participants, as members of social networks, what they need to do to stay current in the virtual world. The tables may be turning, with the sign/body seemingly the new referent, the new *bio-graph*, from which Web participants increasingly take their cues. To paraphrase Karl Marx, graphical chat, replete with virtual objects and sign/bodies serving as "social hieroglyphics" (1952: 32) is part of an intensification of allegorical experience in the world that today works to ritualize capital's inherently metaphysical interest in having relationships between persons programed as an experience of the relationships between things. Relationships between automata are relationships between things though they may appear otherwise to human sensation. The magical practices and the political economy of metaphysics continue to display right in front of our eyes, though many critics continue to see only signs of exchange.

Notes

1 Second Life arguably remains the best known MUVE. Its very name conveys the metaphysically inflected expectations infusing the site as well as the broader cultural turn to the techno-metaphysics identified above.

2 The personal webcam sites I examine, those of "early adopting" gay/queer men during the initial phase of webcam popularization between 1996 and 2002, are of particular interest to mobility studies. While mobility is increasingly a normalized expectation of capitalized social relations, these men, almost always discursively positioned within heteronormative discourse as spatially elsewhere or over there and rarely as here, have therefore been rendered as mobile, denied fixity, and coerced into flow without advance consultation. Many gay/queer men frequently feel in and out of place, both mobile and trapped at the same time, and therefore, as Larry Knopp (2004) argues, often experience pleasure in movement and displacement. These early adopting men, therefore, understand the Web as a site of movement and flow, a virtual place to imaginatively relocate to a virtual elsewhere. The kinds of online aesthetic and telefetishistic strategies they developed during the digital period we now refer to as "Web 1.0" were quixotic and indexical means to quasi materialize and historicize an embodied experience of placelessness, coupled to a visible refusal of the ongoing hatred for gay/queer bodies frequently rendered invisible.

3 For Peirce, each of us is a transmitting sign. His argument exceeds or voids to a certain degree not only the modern duality of the referent and its representation but also, in its insistence on the connectivity among all things, the distinction between the ideality and materiality of these things. What matters most to Peirce is the ways that things communicate. In his nomenclature, an indexical message "points to" an object or is a sample of that object. Peircian indices include, for example, smoke as a natural index of fire, and a footprint in the sand as an index of the person whose foot earlier rendered the imprint. The index, as a specific type of sign, announces or directly points to the presence of the thing itself.

4 I noted above my interdisciplinary interest in utilizing valuable insights from different schools of thought to synthesize new ways of conceptualizing mobility and its relationship to online forms of telepresence and subjectivity. While I draw on

Deleuze's theory of the movement-image and Derrida's theory of the trace (both of which are informed by Peirce's pioneering work on signs) in developing this synthesis to argue for the sign/body, I do not strictly adhere to a Deleuzean, Derridean, or Peircian ontology.

References

Davis, E. (1998) *TechGnosis: Myth, Magic and Mysticism in the Age of Information*. New York: Harmony Press.

Debord, G. (1994) *The Society of the Spectacle*. Donald Nicholson-Smith, trans. New York: Zone Books.

Deleuze, G. (1986) *Cinema 1: The Movement-Image*. Hugh Tomlinson and Barbara Habberjam, trans. Minneapolis, MN: University of Minnesota Press.

Derrida, J. (1976) *Of Grammatology*. Gayatri Chakravorty Spivak, trans. Baltimore, MD: Johns Hopkins University Press.

Ehrsson, H.H. (2007) "The Experimental Induction of Out-of-Body Experiences." *Science* 317(5841): 1048.

Fletcher, A. (1964) *Allegory: The Theory of a Symbolic Model*. Ithaca, NY: Cornell University Press.

Hillis, K. (2009) *Online a Lot of the Time: Ritual, Fetish, Sign*. Durham, NC: Duke University Press.

Holman, C.H., and W. Harmon. (1992) *A Handbook to Literature*, 6th ed. New York: Macmillan.

Knopp, L. (2004) "Ontologies of Place, Placeless, and Movement: Queer Quests for Identity and their Impacts on Contemporary Geographic Thought." *Gender, Place and Culture* 11(1): 121–34.

Lenggenhager, B. *et al*. (2007) "Video Ergo Sum: Manipulating Bodily Self-Consciousness." *Science* 317(5841): 1096–99.

Marx, K. (1952) *Capital*. Friedrich Engels, ed., Samuel Moore and Edward Aveling, trans. Chicago, IL: Encyclopaedia Britannica.

Nelson, V. (2001) *The Secret Life of Puppets*. Cambridge: Harvard University Press.

Chapter 19

Location-aware technologies

Control and privacy in hybrid spaces

Adriana de Souza e Silva and Jordan Frith

Location-aware mobile technologies interface[1] people's relationships to public space by allowing individuals to retrieve place-specific digital information and connect to nearby people depending on their relative location in physical space. The devices' awareness of physical location is accomplished via triangulation of radio waves, WiFi, or Global Positioning Systems (GPS). Whereas mobile phones were initially studied as technologies that helped people withdraw from their physical surroundings (Geser 2004, Gergen 2002, Puro 2002), it is now evident that one of the major characteristics of mobile (smart) phones is their ability to allow for diverse types of connections to local spaces and local people[2] (de Souza e Silva and Sutko 2009, Gordon and de Souza e Silva 2011, Humphreys 2007). For example, location-based social network (LBSN) software such as *Foursquare* and *Brightkite* allow users to visualize the physical location of their friends on their mobile phone screen (de Souza e Silva and Frith 2010a). Likewise, location-based advertising (LBA) can now deliver coupons whenever a user is within a certain distance of specific stores, and geotagging applications such as *WikiMe* and *GeoGraffitti* allow individuals to access and upload information that is place specific.

Interacting with location-specific information transforms the city into a hybrid space where the physical and the digital merge through the social use of mobile interfaces (de Souza e Silva 2006). Furthermore, because users have the ability to customize the types of information they are willing to interact with (which friends they would like to see, which coupons they want to receive, what information they want to access), we suggest that individuals might use these devices to personalize and control their experiences of public spaces. These technologies are thus used as types of filters (i.e., interfaces) that allow people to select the information they access about the spaces they move through.

The ability to control shared spaces did not emerge with location-aware technologies. Other mobile media, such as the book and the iPod, help individuals engage with the public on their own terms. For instance, reading a book on a crowded train allows individuals to partially control their experience of space by focusing on the narrative of the book and pay selective attention to their physical surroundings (Schivelbusch 1986). The same goes for auditory

media such as the iPod or the Walkman: by adding an auditory layer to public spaces users are able to control the otherwise "chaotic" perception of urban spaces (Bull 2000, Bull 2007, Hosokawa 1984). While location-aware technologies do share many similarities with these other forms of mobile media, especially the perceived merging of borders between public and private spaces, three major differences make them unique, and therefore an important area of study: (1) the ability to personalize and filter digital information from their surrounding space, (2) the ability to interact with location-based information that is geographically "attached" to the public space, and (3) the privacy concerns associated with the public sharing of location.

In this chapter, we address these issues by focusing on how location-aware mobile devices interface users' interactions with public spaces by helping them to control and personalize these spaces, therefore challenging established conceptions of public and private. We use examples of other mobile portable media, such as the book, the Walkman, and the iPod, to acknowledge that these issues did not emerge with location-aware technologies.[3] But we then demonstrate that location-aware technologies differ from other types of mobile media due to their ability to allow users to locate information and people in their surrounding space and the corresponding privacy concerns.

Ultimately, we argue that the way we experience urban spaces is often influenced by the material interfaces that mediate our relationships with them – in this case, mobile technologies. This raises interesting questions of individual agency and how subjects are positioned in the larger heterogeneous networks of people, technologies, and discursive formations that constitute any public space. While a full development of our perspective is beyond the scope of this chapter,[4] it is important to note that we recognize mobile technologies as both shaping and being shaped by larger societal trends (Castells 2000, Deleuze and Guattari 1987, Hayles 1999, Latour 2005, Turkle 1995). In this chapter, we are interested in the experience of the individual. Urban scholars, ranging from Georg Simmel (1950) to Richard Sennett (1977), have written extensively on how individuals experience mobility in urban spaces, arguing that with the growth of urban areas and the parallel growth in individualism, individuals have developed new ways of interacting in public spaces. Building on Simmel and Sennett, we argue that to understand how people experience and negotiate urban spaces, we also need to analyze the material characteristics of mobile interfaces that accompany users while they move through these spaces. These interfaces often influence not only how users interact with physical spaces, but also how people socialize in the city.

Reading on the train, listening on the street

More than a century ago, Simmel (1950) discussed the growth of urban centers and the overstimulation of senses as a byproduct of the increasing

mobility of the subject, the invention of electric light, crowded streets and boulevards, and imminent interactions with strangers. For Simmel, the city was incomprehensible in its unfiltered form; consequently, it was necessary to develop a type of mental reserve to parse out various social situations from the aural and visual chaos of the urban street. He called this mental reserve a *blasé* attitude, which can be understood as a psychological filter through which the metropolitan resident interacted with the city space (Simmel 1950, p. 415). The *blasé* attitude was a way of (dis)engaging with public space characterized by a rational and calculating reserve. By being mentally able to engage and disengage with the public space around them, metropolitan individuals developed a personalized way of controlling the apparent chaos of urban life, indispensable for the survival in the city.

For at least two centuries, individuals have also used mobile media, such as books, newspapers, Walkmen, iPods, and mobile phones, as a sort of technologically enabled *blasé* attitude. These media are generally framed as "removing" users from public spaces (Gergen 2002, Geser 2004, Puro 2002, Uzzell 2008); however, this perceived "disconnection" from one's physical surroundings can actually be seen as a way of interacting with public space and exerting a personalized form of control over the apparent chaos of the public setting. The book is an early example of how people managed and controlled their experience of public space. Reading a book in a crowded place, such as a bus or a park, allows the reader to divert her attention from the physical surroundings, selecting when and how to interact with that space. We can see a historical example of how people do so by briefly discussing the early days of railway travel.

With the development of the railway in the early 19th century, book publishers began publishing smaller, more portable books for travel (Manguel 1997). These early types of portable media were known as railway literature, and soon the sight of people reading became commonplace on trains. Because of the social setting of the train that positioned strangers in a U-shaped compartment, train travelers felt the need to filter each other's presence, and reading fulfilled the desire to manage the uncomfortable social situation of the train compartment. Schivelbusch (1986) notes that the lower classes did not read in trains. Besides their lower levels of literacy, wagons in the third and fourth classes were not U-shaped. This is interesting because it shows how the use of technology in public space is directly associated with that space's configuration. Additionally, Schivelbusch acknowledges that the emergence of the habit of reading in trains is related to the increasing stimuli associated to the train travel (vs. the slower mode of horse-back travel) in which passengers had to interact with a greater number of objects and persons. So, they needed the book as an interface to that space. But the habit of reading was not only a consequence of the construction of space; it also influenced passengers' experience of the train compartment. The narrative of the novel becomes part of one's experience of space, not by withdrawing the reader from the space, but as a

material filter used to control one's interaction with the public. Individuals may be thrown into a train compartment, just as Simmel's urbanites were thrown into the chaos of the street, but they can control randomness by using the book to impart a certain kind of order.

Similar to the book, the Walkman was met with derision by those who feared its ability to withdraw users from public spaces and lead to new types of social atomization (du Gay *et al.* 1997, Hosokawa 1984). Even scholars who did not bemoan Walkman use still often conceptualized it as a tool individuals used to withdraw from public space. For Hosokawa (1984), the ability to choose the soundtrack through which one experiences spaces can isolate the listener from contact with other people in the vicinity, turning the physical environment into a background to the listener's thoughts. Similarly, discussing interviews with Walkman users, Bull (2000) suggests that the Walkman often had a major effect on people's perception of their surroundings by withdrawing them from their geographical space. He argued that the Walkman use allowed individuals to partially ignore the space they traveled by imparting a personalized "soundscape" on the public space. Bull's (2007) subsequent interviews with iPod users suggested much of the same interaction with public spaces as his interviews with Walkman users, including a sense of occupying a personalized "soundscape" and not always being aware of the space being traversed. As with the Walkman, iPod users still put on headphones and soundtrack their space, but iPods give users greater control over how they interact with their surroundings. Because of their memory and processing power, iPods let people customize their music choice to match their space.

Many of the issues raised by the widespread use of Walkmen and iPods as portable technologies are also echoed in early mobile phone studies. Mobile phones have also been regarded as withdrawing users from their physical surroundings (Gergen 2002, Geser 2004, Puro 2002).[5] Matsuda (2005) calls this phenomenon "selective sociality," and Habuchi (2005) describes it as "telecocooning." However, that mobiles – and the other portable media discussed above – do not necessarily remove people from physical space. Rather, they provide users with a filter that helps them select and control with whom and what they want to interact with in public spaces. We see these technologies as interfaces that mediate users' interactions with public spaces. Ultimately, they function similarly to Simmel's *blasé* attitude, by which the metropolitan man pays attention to some aspects of public spaces but ignores others. Individuals use these personal media as ways of controlling their interactions with their surrounding space, not necessarily by withdrawing from it.

Controlling and managing public spaces has often been perceived as an invasion of the public by the private (Geser 2004, Fortunati 2002). Although public and private are socially and culturally defined entities, although their boundaries have shifted through history, and although both have frequently ingressed upon one another, the fact that we are able to

talk about "public" and "private" means there are at least some general conceptions that define them as both different from and complementary to each other. If public spaces are perceived as spaces individuals have little control over, then private spaces are secluded spaces where individuals can reorganize and produce more through their own agency. Mobile media are claimed to "privatize" public spaces because they give users a feeling of control and familiarity that generally belongs to private spaces. By reading a book, or listening to music in public, users feel in control over their physical surroundings and therefore create their own personal spaces in public settings (Bull 2001, Manguel 1997, Sterne 2003). Now we are witnessing the emergence of yet another type of personal mobile media: location-aware mobile technologies.

Location-aware mobile technologies

Like earlier forms of mobile media, location-aware mobile technologies can be conceptualized as interfaces that individuals use to control their interactions with public space. They are, however, intrinsically different from the previously analyzed mobile media. All the above-mentioned technologies manage users' interactions with public spaces by introducing an external code that does not belong to it. Although these technologies reconfigure their users' sense of place by focusing their attention elsewhere, whether it is the narrative of a novel or the beat of a favorite song, neither of these are place dependent. For example, a book's narrative is not necessarily about the place where it is being read; the voice of a cell phone conversation generally comes from elsewhere; and the iPod's songs are loaded independent of location. Conversely, location-aware devices allow for what may be a reconnection to physical space because the information users access depends on their physical location. For example, a user equipped with a GPS-enabled mobile phone in Copacabana beach who opens the application *Foursquare* is able to see many locations (restaurants, bars, venues) that are nearby. Similarly, if she decides to tweet about Copacabana, that piece of information can be coded with the lat/long (latitude/longitude) geographical coordinates of that place, which will then appear to anyone else standing in Copacabana searching for people tweeting nearby. Location-based services (LBS), especially LBA, deliver coupons and offers to users depending on their location in physical space. In addition, LBSN applications such as *Loopt, Foursquare, GoWalla*, and *Whrll* allow users to visualize the location of nearby friends or other people using the application on a map on their mobile phone screen.

There are three important implications of the use of location-aware technologies in public spaces that are not present with other forms of nonlocative mobile media[6] discussed above. First, location-aware mobile technologies allow users to interact with previously existing local information, for example,

by accessing a *Wikipedia* article about a local facility. Second, they allow users to create local information that might be shared with others in the vicinity, as in the case of writing a review about a local restaurant and attaching lat/long coordinates to it. Finally, and most importantly for our argument, they enable users to select the types of information with which they want to interact from the physical surrounding space. For example, if a *LooptMix* user is looking for graduate students interested in literature and independent film, she can set her preferences to find people in her environment who are graduate students who like literature and independent films. She is then able to see on her mobile phone screen graphic representations of everyone around her who uses *LooptMix*, attends graduate school, and likes literature and independent film. Conversely, she might not be aware of other graduate students who like videogames and soccer. So, if Simmel's *blasé* attitude worked as a psychological filter to public spaces, location-aware technology literally selects from that space the people and sites with which users would like to interact. This personalized social space, interfaced through the mobile phone, shows only other nearby people and information that matches the user's interests.

Like other types of mobile media, location-aware mobile technologies also challenge the established borders between what is private and what is public. Gordon (2009, p. 26) suggests that with location-aware mobile technologies, "private space is no longer defined solely as control over a geographic domain; it is control over the access and production of data within flexible information flows." The forms of "privatization" or control over public spaces that emerge with location-aware technologies are more powerful and may have more long-lasting consequences than the changes brought about by other forms of mobile media. People without the right technologies will not be able to access the same type of digital information that now permeates physical spaces in the form of the location of friends, restaurant reviews, historical information about places, advertising coupons, and so on; therefore, individuals who use these services will increasingly shape their experiences of public spaces through the preferences and settings on their location-aware applications.

Public spaces embedded with location-specific information follow a logic similar to the fairly recent development of personalized online spaces found all over the Internet. Gordon (2010) calls these personalized digital spaces "digital possessives." Digital possessives can be seen most obviously in the use of the "my" pronoun online. My Facebook page is "my" profile. My search preferences are "my" preferences. With LBS, this logic of personalized digital space has moved into the public spaces of the city. By setting preferences with different LBS, users interact with a personalized visualization of the city through their mobile phones. The restaurants that appear when they search for geotagged recommendations in close proximity to their location can be set to match their preferences. They can also use LBSNs to visually map the location of their friends, and in a way. So "my" public space becomes different than other people's experience of

public space. Therefore, people who do not appear on the map may become a less important part of that space from the user's perspective than those who do.

These new methods of filtering public space will have consequences not only for people who use location-aware technology, but also for people who do not have access to these technologies. They might lead to a type of differential space, where only those who own the technology are able to browse and access location-specific information (de Souza e Silva and Frith 2010b). So, two people might be seating side-by-side on a bus but have a substantially different experience of the same physical space. However, different experiences of space do not necessarily lead to their disintegration, as so often was feared by mobile communication scholars (Hampton *et al.* 2009, Wellman 2002). On the contrary, these different experiences comprise a new way of understanding public space. Gordon and de Souza e Silva (2011) call these new spatial formations net-localities:

> Net localities are practiced spaces – they which develop over time, through social practices with technology. What's more, they include all those people who are co-present in the physical space who are not accessing digital information. The woman walking down the street without a device, not accessing information, becomes part of the situation that comprises the space.
>
> (p. 86)

As a consequence, the production of net-localities influences both users of the technology and those unaware of the digital information present in the space. For example, if a coffee shop starts sending all its discount coupons through LBA, those who do not have a location-aware phone will no longer be able to get discounts. Or if friends increasingly coordinate through LBSNs, those who do not belong to the network will also miss out social events. What we are witnessing, thus, is the emergence of a new type of public space that is not only composed by face-to-face interactions, but also includes remote users, and digital information "attached" to places. This new configuration of public space is increasingly personalizable through users' preferences. LBS literally draw from the digital information embedded within physical space, and to do so, the services filter out information not of interest to the user. The mobile phone becomes the interface with which to negotiate the spaces of the city, enabling users to manipulate and personalize them.

Paradoxically, these same technologies that allow for increased control over public spaces can also contribute to a sense of powerlessness in regards to privacy. While location-aware technologies allow users increasingly to personalize and control their surroundings, an immediate consequence of being able to locate people and things is that one can also be located. The individual's location is materialized on the mobile screen and shared with

others. The possibility of having one's location information disclosed leads to serious concerns about privacy, especially when the person being located has no control over who owns that location information. Because location-aware technologies basically allow other parties to know one's location, there is a perceived invasion of privacy related to disclosing one's personal location – which has traditionally been considered private information (Monmonier 2002).

In a former study, we have identified two primary types of privacy concerns that arise with the use of LBS: collateral surveillance (from other users) and top-down surveillance (from the government and corporations) (de Souza e Silva and Frith 2010a). The first type of surveillance occurs mostly among users of LBSNs. As we have showed elsewhere, popular press outlets have repeatedly warned LBSNs users about the dangers of stalking correlated to the public sharing of location (ibid.). Another type of privacy concern arises when people fear that the government and corporations are accessing individuals' location information without customers' prior consent. This is very common in the case of LBA. LBA is already one of the major uses of location information, and it has been identified as a key piece of future advertising models (Clifford 2009). The main perceived problem with LBA is that LBS privacy policies are generally unclear about with whom they will share users' location information (de Souza e Silva and Frith 2010b). As a consequence, many users sign up for one service, but end up receiving LBA from other companies that were not authorized to access their location. Other serious issues of locational privacy are associated with governmental surveillance (Blumberg and Eckersley 2009). It is unclear how often or how easily mobile phone companies turn over individuals' location history to governments, though evidence suggests it may be more often than many people think (Zetter 2009).

As we have seen through the recent controversies over Facebook's changing privacy policies, many people have little understanding of how their information is being used or with whom it is shared. We can expect to see the same phenomenon arise with LBS, which often have opaque privacy policies (de Souza e Silva and Frith 2010b). The sense of control users experience when moving through space can quickly turn into a feeling of helplessness when they are reminded – whether by an individual who finds them through an LBSN or a particularly accurate LBA – that they do not always control their locational information. The personalized spaces carved out through users' preferences can become alarmingly public when they lose control over their personal information.

Conclusion

Mobile technologies can be understood as technologies of control. We read, listen to music, and talk on mobile phones in an attempt to control our experience of space. Mobile media, such as the book and the Walkman, already helped users to control and manage their interactions with public spaces.

The use of these technologies has frequently raised issues about the private invading the public. In this chapter, we argued that location-aware mobile devices mark a distinct change in issues of personalization and the divide between private and public. Other mobile technologies allowed individuals to control their experience of public space by introducing a code (text or audio) that was separate from that space. Conversely, location-aware mobile devices allow users to interact with the digital information embedded in that space, and thus individuals can further control how they manage their interactions with nearby people and information. By infusing physical spaces with digital information, the experience of those spaces can be manipulated through location-based applications. The implications of these changes are profound, not only for sociability in urban spaces, but also to how these spaces might be planned and constructed.

Urban planners will likely develop new types of spaces that are designed to be manipulated by LBS, as can already be seen in some ubiquitous computing environments (Greenfield 2006). Addressing these changes, communication and new media scholars ought to depart from traditional conceptualizations of public spaces, privacy, and surveillance in order to understand the paradox that emerges with the use of location-aware technologies: Users have simultaneously increased control over their surrounding physical spaces, but very little control over how their locational information is used by different service providers, including the potential for such information to be shared with other corporations, governments, and security agencies. Future studies should focus on how and why users willingly sacrifice privacy for convenience when they use LBS. More importantly, future studies should address the changing meaning of privacy and the new dichotomy public versus private spaces that emerges with location awareness.

Notes

1 Throughout this chapter, we are not using the term interface in a technical sense that refers solely to the mobile phone graphic user interface (GUI). We see the device itself as an interface to public spaces, that is, a filter and a mediator to these spaces. As such, "interface" includes the software and hardware behind the interface, the data traffic through the network, the software and hardware infrastructure that makes the network possible, and the server-side databases. We are less concerned about the technical dimensions of the technology, and more interested in the kinds of relationships it enables us to have with public spaces. We follow the conceptualization of interface proposed by de Souza e Silva (2006, p. 262), who suggests that interfaces reshape not only communication relationships, but also the space in which they take place.

2 In the context of this chapter, we define local in geographical terms, meaning something physically proximate to the individual.

3 These examples are not meant to be comprehensive, that is, our goal is neither to provide a historical overview of the use of these technologies, nor to address all types of mobile technologies, such as newspapers or portable radios. Furthermore, because location-aware technologies are personal and portable, we chose to focus on portable media that can be carried by the user in public spaces. This excludes

other forms of media that are not easily portable, such as car stereos, boom boxes, or car phones. Furthermore, while we acknowledge that different types of mobile technologies enable a wide range of cultural and social production of public spaces, we are interested in how these technologies shape individual and micro-interactions to public spaces.

4 For more details about how this relationship between mobile technologies and urban sociability, see de Souza e Silva and Frith (2010b), Frith (in press), de Souza e Silva and Frith (2012).

5 For more details and different perspectives on the discussion about mobile phones and urban spaces see Gordon and de Souza e Silva (2011) and Laurier (2001).

6 All mobile phones can be located (via triangulation of waves or WiFi), but not all of them include the ability to download location-based software, which is what allows for the interactions with location-based services and social networks.

References

Blumberg, A.J. and Eckersley, P. (2009) 'On Locational Privacy and How to Avoid Losing It Forever', available: http://www.eff.org/wp/locational-privacy [accessed 11/29/09].

Bull, M. (2000) *Sounding out the city: Personal stereos and the management of everyday life*, Oxford: Berg.

Bull, M. (2001) 'The world according to sound: Investigating the world of Walkman users', *New Media and Society*, 3, 179–197.

Bull, M. (2007) *Sound moves: iPod culture and urban experience*, New York: Routledge.

Castells, M. (2000) *The rise of the network society*, Oxford: Blackwell.

Clifford, S. (2009) 'Advertisers get a trove of clues in smartphones', *New York Times*, available: http://www.nytimes.com/2009/03/11/business/media/11target.html [accessed 11/20/09].

de Souza e Silva, A. (2006) 'From cyber to hybrid: Mobile technologies as interfaces of hybrid spaces', *Space and Culture*, 3, 261–278.

de Souza e Silva, A. and Frith, J. (2010a) 'Locational privacy in public spaces: Media discourses on location-aware mobile technologies', *Communication, Culture & Critique*, 3(4), 503–525.

de Souza e Silva, A. and Frith, J. (2010b) 'Locative mobile social networks: Mapping communication and location in urban spaces', *Mobilities*, 5(4), 485–506.

de Souza e Silva, A. and Frith, J. (2012) *Mobile interfaces in public spaces: Locational privacy, control and urban sociability*. New York: Routledge.

de Souza e Silva, A. and Sutko, D.M., eds. (2009) *Digital cityscapes: Merging digital and urban playspaces*, New York: Peter Lang.

Deleuze, G. and Guattari, F. (1987) *A thousand plateaus: Capitalism and Schizophrenia*, Minneapolis, MN: University of Minnesota Press.

du Gay, P., Hall, S., Janes, L., Mackay, H. and Negus, K. (1997) *Doing cultural studies: The story of the Sony Walkman*, London: Sage.

Fortunati, L. (2002) 'Italy: stereotypes, true and false' in Katz, J. and Aakhus, M., eds., *Perpetual contact: Mobile communication, private talk, public performance*, Cambridge, MA: The MIT Press, 42–62.

Frith, J. (in press) 'Splintered space: The smartphone as the screen to the city', *Mobilities*.

Gergen, K. (2002) 'The challenge of absent presence' in Katz, J. and Aakhus, M., eds., *Perpetual contact: Mobile communication, private talk, public performance*, New York: Cambridge University Press, 227–241.

Geser, H. (2004) 'Towards a sociological theory of the mobile phone', *Swiss Online Publications*, available: http://socio.ch/mobile/t_geser1.htm [accessed 12/2/09].

Gordon, E. (2009) 'Redefining the local: The distinction between located information and local knowledge in location-based games' in de Souza e Silva, A. and Sutko, D.M., eds., *Digital cityscapes: Merging digital and urban playspaces*, New York: Peter Lang, 21–36.
Gordon, E. (2010) *The urban spectator: American concept cities from Kodak to Google*, Lebanon, NH: Dartmouth College.
Gordon, E. and de Souza e Silva, A. (2011) *Net locality: Why location matters in a networked world*, Boston, MA: Blackwell Publishers.
Greenfield, A. (2006) *Everyware: The dawning age of ubiquitous computing*, London: New Riders.
Habuchi, I. (2005) 'Accelerating reflexivity' in Ito, M., Okabe, D. and Matsuda, M., eds., *Personal, portable, pedestrian: Mobile phones in Japanese life*, Cambridge, MA: MIT Press.
Hampton, K., Livio, O. and Sessions, L. (2009) 'The social life of wireless urban spaces: Internet Use, social networks, and the public realm', *Journal of Communication*, 60, 701–722.
Hayles, N.K. (1999) *How we became posthuman: Virtual bodies in cybernetics, literature, and informatics*, Chicago: The University of Chicago Press.
Hosokawa, S. (1984) 'The walkman effect', *Popular Music*, 4, 165–180.
Humphreys, L. (2007) 'Mobile social networks and social practice: A case study of Dodgeball', *Journal of Computer-Mediated Communication*, 13(1), article 17.
Latour, B. (2005) *Reassembling the social: An introduction to actor-network theory*, Oxford: Oxford University Press.
Laurier, E. (2001) 'Why people say where they are during mobile phone calls', *Environment and Planning D*, 19, 485–504.
Manguel, A. (1997) *A history of reading*, New York: Penguin Books.
Matsuda, M. (2005) 'Mobile communication and selective sociality' in Ito, M., Okabe, D. and Matsuda, M., eds., *Personal, portable, pedestrian: Mobile phones in Japanese life*, Cambridge, MA: The MIT Press, 123–142.
Monmonier, M.S. (2002) *Spying with maps: Surveillance technologies and the future of privacy.* Chicago: University of Chicago Press.
Puro, J.P. (2002) 'Finland, a mobile culture' in Katz, J. and Aakhus, M., eds., *Perpetual contact: Mobile communication, private talk, public performance*, Cambridge, MA: Cambridge University Press, 19–29.
Schivelbusch, W. (1986) *The railway journey: The industrialization of time and space in the 19th century*, Berkeley, CA: University of California Press.
Sennett, R. (1977) *The fall of public man*, New York: Knopf.
Simmel, G. (1950) *The sociology of Georg Simmel*, New York: Free Press.
Sterne, J. (2003) *The audible past: Cultural origins of sound reproduction*, Duke University Press.
Sutko, D.M. and de Souza e Silva, A. (2011) 'Location aware mobile media and urban sociability', *New Media & Society*, 13(5), 807–823.
Turkle, S. (1995) *Life on the screen: Identity in the age of the Internet*, New York: Simon and Schuster.
Uzzell, D. (2008) 'People–environment relations in a digital world', *Journal of Architecture and Planning Research*, 25(2), 94–105.
Wellman, B. (2002) 'Little boxes, globalization, and networked individualism', in *Revised papers from the second Kyoto Workshop on Digital Cities II, computational and sociological approaches,* Volume 2362/2002, 337–343. Berlin: Springer-Verlag, 10–25.
Zetter, K. (2009) 'Feds 'pinged' Sprint GPS data 8 million times over a year', *Wired*, available: http://www.wired.com/threatlevel/2009/12/gps-data/ [accessed 1/1/10].

Chapter 20

Flow and mobile media

Broadcast fixity to digital fluidity

Kathleen Oswald and Jeremy Packer

In this chapter, we argue for an updated and materialist understanding of the concept flow as a means for examining how mobile media function to create *free* subjects amenable to neoliberal configurations of governance and capital. Raymond Williams first described flow in his 1974 book *Television: Technology and Cultural Form* (1974/2003) as the televisual techniques used to maintain audiences' attention to the television screen, at times for several consecutive hours. Williams was trying to understand how disparate television content (news, sports, movies, commercial advertisements, public service announcements, game shows, etc.) were made to seamlessly flow together almost as if working in narrative unison. This approach was ground breaking and *Television* has been said to be "the founding text of television studies" (Gripsrud, quoted in Williams 1974/2003), which reoriented scholarship away from "the content of television programs" toward "the shaping effect of television's technological structures" (Turner, quoted in Williams, 1974/2003). Obviously, within these technological structures the flow of television content *did* matter, but content was merely an element in the complex of societal, technological, economic, and cultural forces that had integrated broadcasting into a new way of living that was both more private and more mobile. Over the past 35 years flow has been fruitfully applied periodically in television studies (Boddy, 2004, 2011; Hay, 2003; Kackman *et al.*, 2011), the online journal *FlowTV* has taken its name from the concept (flowtv.org), and it has been given new meaning in the world of computer gaming and internet architecture where users are said to go into "flow-states" which keep them immersed in various sorts of virtual environments. In all of these accounts, flow acts as a metaphor of movement in which audiences are mentally or cognitively moved through media content, while their bodies remain fixed in space.

Other recent scholarship suggests that the concept needs to be rethought given the radical changes to television's technological structures that began with the advent of the remote control, cable, the VCR, and other *smart* appliances (Hay, 2003) and continue to be reshaped by digitization (Boddy, 2011). Other scholars have attempted to treat *Television as Digital Media*

(Bennett & Strange, 2011) and answer the question of what is *Television after TV* (Spigel & Olsson, 2004). We suggest that digital screens need to be understood outside the conventions of media specificity; that is we should no longer treat film, television, the computer, and telephones as separate entities. Following from James Hay (2003), we suggest that one way of renewing the concept's vitality given these changing structures is by approaching flow in terms of the very material set of practices, techniques, and technologies that integrate individuals into the temporal and spatial dynamics of contemporary economic and cultural expectations. More specifically, rather than attend to the flow of content that works to maintain an audience's attention in fixed position toward the television screen, according to a set schedule, and over extended periods of time, we examine how the use of multiple screens orchestrate the individual's material flow through space according to a fluid set of temporal programs. The media environment is no longer devoted to keeping viewers fixed on one transmission, but rather *fixed in transmission* through multiple screens that guide subjects through all of time and space. In our conception, flow is the process by which subjects and attendant data move seamlessly through the world in unison. Numerous and varied screens (television, computer, tablets, mobile phones) work in concert to network and extend the self in whatever ways are necessary to link and guide the constant flow of the self's social, governmental, economic, and biopolitical data in ever-present and in ever-useful means.

Raymond Williams' account of television was in large part devoted to understanding changing forms of mobility. He looked to how the automobile and broadcasting worked to newly organize the movement of capital, subjects, and ideological content, largely through the concept of *mobile privatization*. Understanding television as a cultural and social technology, Williams pursued a line of inquiry that avoided the technological determinism/determined technology dichotomy which had proven unproductive, arguing instead that television must be understood as a cultural technology. Looking to the development and deployment of telegraph, telephone and radio, he described two phases of communication: operational and broadcasting. The operational phase involves the sending and receiving of messages in the realm of military and business ventures and operated as point-to-point modes of communication. The second articulation – broadcasting – moves past the operational view, and had widespread significance as part of an emergent mass culture throughout much of the 20th century and further, can be seen as "a powerful new form of social integration and control" (1974/2003 p. 16).

Situating the emergence of broadcasting in an expanding market of "consumer durables" such as appliances and automobiles, Williams contrasts public technologies such as street lighting and railways with "a new kind of technology for which no satisfactory name has yet been found" and explains that this kind of technology, which serves an "at-once mobile and home-centered way of living" is a form of *mobile privatization* (1974/2003 p. 19). Mobile privatization refers to a tendency associated with a group of

emerging technologies and infrastructures that organized mobility, privacy, technology, and the home in ways decidedly different from a previous era dominated by public technologies and closer proximity. In particular, televisions, automobiles, and suburbs were organized in conjunction with the needs of postwar consumer capital. Of importance to our analysis is Williams' explanation that these technologies helped to integrate the daily work commute with the suburban lifestyle, and how television's schedule worked to temporally and spatially organize idealized and highly normative ways of life. The daily routine was accompanied at home by a television regimen that coincided with specific periods for children's, women's, and family's viewing: morning, daytime, afternoon, the news hour, primetime, late night, and "off-air." The routine of commuting was accommodated by "drive-time" radio broadcast. Broadcasting was a mechanism that managed spatiotemporal configurations, through both flow *and fixity*.

In "From windscreen to widescreen: Screening technologies and mobile communication" (Packer & Oswald, 2010), we looked at the ways in which screening technologies function as the infrastructure for newly organizing mobile privatization, tracing the genesis of many mobile technologies back to the automobile and suggesting that the relationships between (auto)mobility, domestic life, communication technologies, and economic productivity have been significantly reorganized since Williams' analysis of the 1970s. The role of screens has been fundamental in creating greater spatial and temporal fluidity of the population, information, capital, and labor. Such fluidity has been built on a series of recently developed or intensified communication capacities and infrastructures – storage, access, interactivity, mobility, control, informationalization, and convergence – that enable greater social, political, and economic control through the seemingly contradictory extension of self-empowerment.

Flow 1.0

Williams proposed the concepts of flow and "flow analysis" as a fluid replacement for static distribution analysis. Explaining that broadcasters arranged programs in a fashion designed to keep viewers on a particular station – sequencing – he argued that the planned flow of programming was "perhaps the defining characteristic of broadcasting, simultaneously as a technology and as a cultural form" (1974/2003 p. 86). Flow analysis worked to help a critic look beyond ratios of programming by type and commercials on a given channel for a given time, and rather focus on the ways in which sequenced programming – consisting of a carefully articulated combination of programs and advertisements – worked to keep the viewer *glued to the screen*. This was particularly relevant before the widespread adoption of the remote control: viewers literally had to be compelled out of their seat to change the channel. In a world of few networks or channels (think spatially

here), television for its first 30 years of widespread use in the United States and Britain (Williams' two primary examples) was a device for which the key consideration of programmers was how to keep viewers in front of the screen or channel viewers' attention into a rut. A re-examination of flow in an increasingly mobile media environment requires our attention to shift from focusing on how content was programmed in sequence for a single device (a static space–time orientation) to the reprogramming of a fluidly scheduled mobile life via networked terminals and mobile devices. The television channel that Williams described had a fixed frequency, speed, and direction.

Broadly configured, flow is a way of understanding one specific element in the new social and economic arrangements that Williams describes as *mobile privatization*. In thinking about broadcasting as part of industrial and bureaucratic capitalist arrangements that had changed the temporal and spatial arrangements of everyday life, flow was a means for situating subjects in the spatiotemporal program of capitalist production and reproduction. Broadcasting and flow kept viewers in a fixed position between work time and bed time for the productive (male) subject and helped to integrate television into the circuits and routines of (female) domestic reproduction (Spigel, 1992). Thus the "television program" can be seen as a means for governing specific temporal/spatial arrangements that kept the flow of capital moving (by maintaining consumer demand through advertising) while providing a home-centered means for passing "idle" time – or for making this time productive, turning TV time into "the work of watching" as Jhally and Livant (1986), inspired by the work of Dallas Smythe (1977, 1981), suggested. More recently Andrejevic (2003, 2009) suggests that watching and being watched are both work done to generate capital for media conglomerates. From this perspective, flow provides an explanation of how time could be made most productive for the longest period of time. Flow worked to maintain focus upon not just narrative and news, but upon commercials for the benefit of networks whose profit was built upon Nielson ratings. Making subjects as immobile as possible while at home while aiding their mobility during commutes, shopping trips, and vacations, could be seen as a particular way of programming flow through television and radio broadcasting.

Williams' flow analysis looked to broadcasting in order to understand something about culture in the United Kingdom and the United States, and while his critical insights have continued to inform television and media studies, options for communicating and consuming have been vastly expanded. Along with claims that newspapers are dead or dying, we hear about a "crisis in American Broadcasting" that suggests not only that viewers are more distributed than ever before, but that they are time shifting, format shifting, and screen shifting. With literally hundreds of cable and satellite channels, multiple Internet platforms, torrent sites, online stores, storage media and devices on which consumers view what we think of as "television," it is difficult to argue that Williams' notion of flow or his approach to analyzing it are

adequate tools for today's media scholars. As William Boddy explains (2004), Williams' account of television as a cultural technology generally, and flow in particular, was an historically and hence generation-specific analysis. Jason Mittell, one of the few authors in the edited collection *Flow TV: Television in the Age of Media Convergence* (2011) to discuss Williams' concept of flow, suggests that "files" (p. 50) is a more adequate term for understanding how children growing up are thinking about programming with TiVo. Try explaining flow to a Millennial: they balk at the notion that someone would watch the same channel for two hours. Fortunately, many of them remember a few of the hold-overs: ABC's TGIF (*Thank Goodness it's Funny*) programming and Nickelodeon's SNICK (*Saturday Night Nickelodeon*). With both ending in the mid-2000s, it is only a matter of time before conversations about flow become completely irrelevant to a generation raised on-demand, shifted in both space and time.

Williams' approach not only accounted for programs and advertisements, but further was scalable to different levels of focus – from a day's worth of programming to a close analysis of the interplay of programs and advertisements or a scene-to-scene analysis of a newscast. Flow offered a holistic account ranging from the broad understanding of weekly programming to a focused textual analysis. With long-range analysis of sequence and flow, one could look broadly at programming over the course of several hours, listing programs aired by type or content summary. In this regard, long-range analysis is much like distribution analysis, only programs are listed in the order they aired: think *TV Guide*. Medium-range analysis of flow and "sequence" pays closer attention to the succession of events within and between programs, and is of great value in demonstrating "over a sufficient range, the process of relative unification, into a flow, of otherwise diverse or at best loosely related items" while close-range analysis looks closely to the flow of words and images to understand "the flow of meanings and values of a specific culture" (Williams, 1974/2003 p. 97, 120).

In terms of our analysis, this element of scalability can be leveraged in two important ways. First, in terms of the *range* of analysis, we see value in understanding the flow of screens and persons at a broad level to discern the ways in which populations are programmed to shift their primary focus between cultural technologies throughout the day (the computer terminal at work, the mobile phone in transit, and the television or laptop screen at night). At the same time, we recognize the value of close analyses which track intermittent use of various screens: the personal cell phone at work, the brief consult with the television for the score and the screens of work – made portable through Virtual Private Network connections and Personal Digital Assistants – interrupting prime television (and family) time. Second, while Williams' analysis of broadcasting looked to a limited range of programming options for a broadly conceived mass, with screens we can now leverage scale in terms of *sample*: will the analysis look to the flow of one individual, family, workplace, or overall network traffic? These analyses

can trace individual trajectories (Adams, 2005) or more large-scale patterns of aggregated consumption.

While the financial payoff for network television depended upon delivering stable eyes for advertisements, the financial incentives for mobile media are more nuanced and built upon numerous funding sources ranging from advertising, data-veillance and data-processing to service provider plans to charging by the byte. More than getting us to a better understanding of the crisis in American Broadcasting, such an examination would bring us closer to talking about convergent media as mechanisms for reorganizing how life is conducted, managed, processed, stored, and digitized in real time across space. However, it is important to think about some of the specific ways that "television" has changed, before taking on-board all mobile media. So what does this new form of flow analysis look like? What sorts of screens and activities are we referencing? We now turn to how such screens manifest themselves in terms of flows.

From the little screen to the little mobile screen

Even after large-scale shifts in the ways in which television content is delivered in the United States, television studies are still largely invested in television content, political economic analysis, television as device, globalization, and more recent shifts to media convergence and transmedia storytelling. While some scholars have looked to the specific ways that television is reformed in particular as it has to do with governance and forms of power (Andrejevic, 2003; Bratich, 2006; Ouellette & Hay, 2008), by and large television studies continues to focus on content even as it attempts to deal with the digital. Most of the research questions and foci remain the same: even in looking at the use of multiple screens in television, transmedia storytelling (content) guides the discussion (Evans, 2011; Jenkins, 2006), and does not adequately address the mix of techne and modes of governance that we might call an apparatus, and largely looks at television through the lens of broadcasting rather than the larger set of emerging tele-practices made possible by an increased variety of contents, functions, devices, mobilities, and a range of new services offered through telecommunication bundling such as "Triple Play" options offered by telecom giants Comcast, Time Warner, AT&T, and Verizon.

A large part of this change in focus tracks alongside major networks and large media companies merging with and buying interests in telecommunications companies. Programming on radio was initially a way to sell radios (and later advertising), programs (both media content and applications) are now essentially a way to sell bandwidth. In the Over The Air broadcasting model, the content was delivered for free and supported by advertising – a viewer needed only to buy a "set" to tune in with. Now the content is paid for, the transmission is paid for, and there are a new "set" of ever changing devices that are necessary to fully participate in telemedia culture. It is

widely known that the average life of a cell phone in the United States is 18 months. Many of our televisions are wide-screen format, and after the cathode ray tube, have moved to projection, LCD, plasma, LED, 720, 1080, 3D, and so on. Our computers must be constantly patched, upgraded, and even replaced as battery technology and other advances make them ever more portable. Now we buy devices, content, *and* transmission, and we do it all the time and must use different devices and services depending upon where and how we move through space.

In most simple terms, television content has been made fluid and mobile due to digitization and a proliferation of screens. If there ever was such a unity as a television program, or whether we should have always treated television programming as a remediation of past forms, it should be eminently clear that the lines used to distinguish any audiovisual content in terms of their intended or dominant medium of distribution no longer holds. However, the traditional accounts of what television viewing did, continue but across more devices. Moreover, the acts of being informed, entertained, kept awake, or distracted are increasingly accomplished via screens. Not counting windscreens or other vehicular panoramas (Hay & Packer, 2004; Schivelbusch, 1987), on average Americans spend around 11 h a day looking at "the three screens"; those being television, internet, and mobile device (Knudsen & Ensley, 2011). Add in the average daily commute of nearly an hour and we approach half the hours of a day and nearly 75 percent of waking hours looking at a screen. Further, not only is screen use trending up, but so too is the portability of multiuse screens. The iPad, introduced in 2010 is on pace to become the most rapidly adopted consumer device in history with over 17 million units sold by early 2011 (ibid.).

New flow economies

In his essay "Advertising: The Magic System" (1999, originally 1980), Raymond Williams examined the development of advertising from an action to an institution, which became fully developed between World War I and World War II. During this time (and as advertising expands its platforms to radio and television), he observes a shift from information and repetition to less savory methods of psychological warfare and explains that a critical quality of the institution is that "the material object being sold is never enough" leading him to describe advertising as "*magic*: a highly organized and professional system of magical inducements and satisfaction, functionally very similar to magical systems in simpler societies, but rather strangely coexistent with a highly developed scientific technology" (1980/1999 p. 422).

With more information at our fingertips than ever before, we might question whether this system is still magical. Advertisements still sell us more than the product itself, but as information overload creates conditions in which attention is more divided than ever before, an institution that deals in

attention (advertising is from the Latin advert, to turn attention to) still finds ways to catch some eyes. Increasingly, this means following the shifting flow of the user in time and space across devices. Within the larger shift to user-driven consumption of programming, consumption of messages and products is increasingly enacted through or informed by the screen: product placement, online purchase, user reviews, location aware technology, contest, digital download. It is not only targeted, but also optional: it is information rather than noise. In this configuration, the subject pays for content or programs that suggest products that can be bought over a paid network on a paid-for device: *triple pay* rather than *triple play*.

New logics of consumption intensify the previous model of advertising as creating a continual set of desires, creating the opportunity for the immediate spatially and temporally situated moment to become a moment or purchase. Margaret Morse (1990) examined the homologous sets of desires and phenomenological fixations that overlap in the ideological commitments to freedom, choice, and mobility that intersect in the television, the mall, and the freeway. While such ideological interpenetration remains, the ubiquity of the mobile screen has detached some of the fixity of such circuits of mobility becoming central to the purchase (and not just a vehicle for advertisements and the production of desire), helping people get to brick and mortar places and facilitating the movement of goods and information from online points of purchase to mailing and IP addresses alike. These devices work to transform "the real world" into a magical place, an ever shifting landscape of mobile desire. Some newer Global Positioning System (GPS) units have an option where a user can draw a line over routes they have traveled (or consumed) marking them as used (or used up?). Discount coupons for food and lodging accompany lifetime traffic updates, turning the environment into a consumerscape even for those who have learned to ignore billboards and avoid location-based services on their mobile phones. Other apps make the sound environment searchable for purchase (Shazam) and Google Goggles promises to similarly archive the visible environment. In the meantime, apps that read Universal Product Code codes can be used to facilitate the online purchase of items in the brick and mortar store.

While increased bandwidth expanded possibilities for narrowcasting (broadcasting intensified), the present on-demand model represents a change in kind. While the net is still being cast (widely and narrowly), users have more "power" than ever before in choosing when, where, and to what they will be connected. In this sense, we identify *on-demand* as the model of communication that best describes a new set of tele-practices, and ultimately, a new model of flow. Subjects are able to leverage screening technologies in order to navigate the moves from orbit to orbit – work from home, home to work, leisure time, travel time, work time and domestic time all from any time and space so long as those places and responsibilities were networked, or made accessible by the screen. In terms of flow, however, we cannot say that "surfing" takes us far enough away from the concept of a channel to adequately describe the new ways in which

subjects are made responsible for managing flow, designing their own channels, stations, and content queues from the same devices they use to network with friends, family, and work while managing schedules that transcend traditional fixed 9–5 work, commute, viewing, sleep, and repeat schedules. Tablet PCs are a perfect example – even in the old time schedule, one can read the paper at breakfast, work, navigate home via GPS, and consume traditionally televised media content. While a GPS unit used to mean a discrete single-use device with a screen, usually permanently or semipermanently attached to an automobile, GPS software and locative capabilities are now integrated into all sorts of screens. One's mobility, auto and otherwise, is now aided, if not guided, by screen. This is a theme attested in numerous advertisements for mobile devices and communications data providers. With these new screens – advanced remote controls for living – subjects are not only being made responsible for the management of flow, but also become empowered in the environments they flow through.

Future flow

We conclude with a brief analysis of advertisements and media content that speak to an imagined future where flow is fully accomplished via screens. Within these narratives everyday challenges and problems, as well as problems specific to mobile devices, will *all* be solved by integrating new screens into the flow of our mobile lives. Further, previous problems associated with the use of mobile media, such as accidents or inattentiveness to face-to-face interactions, will also be solved by faster and more networked devices. Microsoft, in their "Really" campaign, makes jest of all the ways people miss out on the wonders of their material surroundings such as a floating lantern display, time spent with children on a teeter totter, or attempts made by a sexily clad partner to get intimate due to the excessive attention afforded antiquated mobile phones. They also point out the apparent stupidity and danger of staring at devices while riding bikes, driving cars, jogging, walking down stairs, or swimming near sharks. Their solution is not to suggest it is time to get rid of devices, but rather that "it is time for a phone to save us from our phones," a phone that can get us "in and out and back to life" (Microsoft, 2010). While this commercial speaks to some concerns, Microsoft still seems to be set in a world where mobile media and life are not yet integrally intertwined. They follow an earlier logic of "lack and excess" in which too little or too much communication causes accidents or social problems (Packer, 2006). Microsoft is clearly in the minority here as nearly all other ads focus exclusively on how mobile media will produce an optimal flow to an everyday life inseparable from media.

In a recent campaign by Verizon for their new multiplatform data plan, FiOS, we see families and individuals make use of screens to manage numerous tasks during the mobile flows of their day. One set of screens provides

mom the ability to move her kids through the home, the dentist, and the family drive to grandmother's house (Verizon FiOS, 2011a). Another grouping allows a young professional to move uninterrupted from home to airport to airplane as he maintains his autonomous mobility (Verizon FiOS, 2011b). Verizon's purest manifestation of such a vision is an internet video titled "Verizon FiOS is Bringing You the Future of Technology" that imagines the potentials of communication in the next 10 years (2010). This commercial also uniquely provides an exemplary account of a series of mechanisms and "technologies" (of governance) that will be managed via one's "multiscreen connectivity." The commercial follows a young male creative professional as he moves through his day – always with the aid of mobile screens. The day begins in a home displaying several flat screens throughout a very contemporary loft space. The camera pans from one screen to the next, landing upon a multi-windowed screen much like that made famous in the film *Minority Report*. A multi-person, multinational conference call is made possible via real-time translation capabilities as we watch a virtual meeting that seemingly spans continents. The dream of perfect communication is finally fulfilled, the difficulties of overcoming time, space, and culture are finally managed. The commercial then moves our subject through a series of daily events in which the mobile media device's capabilities are punctuated by a series of statements: "network security"; "smart devices" – a mobile media device "talks" to the parking meter; "digital medical records" – mobile device talks to a treadmill and collects data for his health; "intelligent networks"; "social media" – he notices an attractive woman jogging next to him and without slowing down or taking out his earphones, he uses the interactive screen on the treadmill to ask her to coffee; "seamless coverage" – while out for coffee he uses his mobile screen to talk "machine to machine" to add parking time; "one company is bringing together devices in ways never imagined"; and "bringing everyone together connecting us all to the future." Our subject is now back at home using a photo, taken with one of his devices, of a child's bracelet that serves as his creative inspiration for the design of a bicycle wheel he is laboring to create. The commercial ends with his screen notifying him that there is "incoming traffic" from his coffee-date, Tyffany, who wants to follow-up on their semi-face-to-face meeting.

Similarly we are told by Samsung (2010) that "life is spontaneous," "life is instantaneous," "life shouldn't be interrupted," because "life is a continuum." Samsung promises us that their screen technologies will unify this life. Your life. In part this is because your mobile screens will allow you "to do one thing" without "stopping to do another." As the various lives represented in the commercial move through their days, we see them sunning at the beach, playing in a park, working in an office, walking through vast cityscapes, partying at a club, babysitting grandchildren at home, hailing a cab, crossing a bustling street, queuing for an ATM, or sitting at a pub. They are variously shown updating flight itineraries while attending business meetings, watching stocks rise and fall while posting on Facebook, or

watching a movie as they find out the score of a sporting event. They are shown working, learning, socializing, and watching. As the commercial attests in its final segment, "live life uninterrupted" and "LET THE INFO FLOW" (caps in original).

What becomes eminently apparent in the idealized world of these advertisements is that a key set of conceptual concerns (or problematizations) are at play in which the screen is seen as the technological solution. Taken as a whole they resonate with the sense that networked smart screens are the mechanism by which time and space will be both overcome and reanimated. The screen becomes the guide for moving from place to place and the mechanism by which spaces and institutions are interconnected. In this sense they are infrastructural, they forge and maintain linkages. The hospital and clinic are interconnected with the gym, with the coffee shop, with the home, and with the entire world. Permeating these interconnections are a set of contemporary neoliberal logics used to govern and organize lives through and by freedom. Network security ensures personal security. Biopolitical enhancement will be accomplished by the collection, storage, and accessing of digitized medical histories. Creative labor will be an integral part of one's daily routine – inspiration can and will happen everywhere, but can only be actualized through screening technologies. Mobility, automobility especially, will be made seamless and safe through screens. The spatial and temporal interpenetration of sociability and labor, privacy and publicity, will be heightened and leveraged by the flows made possible via our screens. Flow unifies the materials of our lives.

References

Adams, P. (2005). *The Boundless self: Communication in physical and virtual spaces*. Syracuse, NY: Syracuse University Press.

Andrejevic, M. (2003). *Reality TV: The work of being watched*. Lanham, MD: Rowman & Littlefield.

Andrejevic, M. (2009). *iSpy: Surveillance and power in the interactive era*. Lawrence, KS: University of Kansas Press.

Bennett, J. & Strange, N. (Eds.). (2011). *Television as digital media*. Durham, NC: Duke University Press.

Boddy, W. (2004). Interactive television and advertising form in contemporary U.S. television. In L. Spigel & J. Olsson (Eds.), *TV after television: Essays on a medium in transition* (pp. 113–132). Durham, NC: Duke University Press.

Boddy, W. (2011). Is it TV yet? The dislocated screens of television in a mobile digital culture. In J. Bennett and N. Strange (Eds.) *Television as digital media* (pp. 76–101). Durham, NC: Duke University Press.

Bratich, J.Z. (2006). Nothing is left alone for too long: Reality programming and control society subjects. *Journal of Communication Inquiry*, 30(1): 65–83.

Evans, E. (2011). *Transmedia television: Audiences, new media and daily life*. New York: Routledge.

Hay, J. (2003). Unaided virtues: The (neo)liberalization of the domestic sphere and the new architecture of community. In Jack Bratich, Jeremy Packer, & Cameron McCarthy (Eds.), *Foucault, cultural studies, and governmentality*. Albany, NY: SUNY Press.

Hay, J. & Packer, J. (2004). Crossing the media (-n): Auto-mobility, the transported self and technologies of freedom. In N. Couldry & A. McCarthy (Eds.), *Mediaspace: Place, scale and culture in a media age* (pp. 209–232). London: Routledge.
Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York and London: New York University Press.
Jhally, S. & Livant, B. (1986). Watching as working: The valorization of audience consciousness. *Journal of Communication*, 36: 124–143.
Kackman, M., Binfield, M., Payne, M.T., Perlman, A., & Sebok, B. (Eds.) (2011). *Flow TV: Television in the age of media convergence*. New York: Routledge.
Knudsen, C. & Ensley, C. (April 4, 2011). Trends and data for the three screens – TV, Internet and mobile. *Mobile Marketer*. Available at: http://www.mobilemarketer.com/cms/opinion/columns/9597.html
Microsoft (2010). *Really: New Windows Phone 7 Official Commercial TV Ad [video file]*. Retrieved from: http://www.youtube.com/watch?v=EHlN21ebeak
Mittell, Jason. (2011). TiVoing childhood: Time shifting a generation's concept of television. In M. Kackman, *et al*. (Eds.), *Flow TV: Television in the age of media convergence* (pp. 46–54). New York: Routledge.
Morse, M. (1990). An Ontology of everyday distraction: The freeway, the mall, and television. In P. Mellencamp (Ed.), *Logics of television: Essays in cultural criticism* (pp. 193–221). Bloomington, IN: Indiana University Press.
Ouellette, L. & Hay, J. (2008). *Better living through reality TV: Television and post-welfare citizenship*. Malden, MA: Blackwell.
Packer, J. (2006). Rethinking dependency: Transportation, communication, and safety. In J. Packer & C. Robertson (Eds.), *Thinking with James Carey: Essays on communications, transportation, history* (pp. 79–100). New York: Peter Lang.
Packer, J. & Oswald, K. (2010). From windscreen to widescreen: Screening technologies and mobile communication. *The Communication Review*, 13(4): 309–339.
Samsung (2010). *Samsung Continuum – Official video [video file]*. Retrieved from: http://www.youtube.com/watch?v=KIi32R3yciY
Schivelbusch, W. (1987). *The railway journey: The industrialization and perception of time and space*. Berkeley: The University of California Press.
Spigel, Lynn. (1992). *Make Room for TV: television and the family ideal in postwar America*. Chicago: University of Chicago Press.
Spigel, L. & Olsson, J. (Eds.). (2004). *TV after television: Essays on a medium in transition*. Durham, NC: Duke University Press.
Smythe, D.W. (1977). Communications: Blindspot of Western Marxism. *Canadian Journal of Political and Society Theory*, 1(3): 1–28.
Smythe, D.W. (1981). *Dependency road: Communications, capitalism, consciousness and Canada*. Norwood, NJ: Ablex Publishing.
Verizon FiOS (2010). *Verizon FiOS is Bringing You The Future of Technology [video file]*. Retrieved from: http://www.youtube.com/user/verizon#p/u/30/MPajK8n10M4
Verizon FiOS (2011a). *FiOS Flex View is Kid Friendly [video file]*. Retrieved from: http://www.youtube.com/user/verizon#p/u/15/BeKPG_bfV7M
Verizon FiOS (2011b). *FiOS Flex View is the Perfect Travel Companion [video file]*. Retrieved from: http://www.youtube.com/watch?v=bwEUUnm0w6o
Williams, R. (1999). Advertising: The magic system. In S. During (Ed.), *The cultural studies reader* (pp. 411–423). London: Routledge.
Williams, R. (2003). *Television: Technology and cultural form*. New York: Routledge. (Originally published 1974).

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