Media and Mobility
Mark Andrejevic

ABSTRACT
This chapter explores the changing relationship of mobility to media technology, considering the ways in which we think about, engage in, and exploit the mobility of people and devices, goods and services, in a world in which mobility serves as an increasingly important type of information and information goes increasingly mobile. The chapter rethinks the ways in which information mobility and physical mobility interact with one another in the transition from industrial era shifts to digital era developments. If mobility has, at times, claimed for itself the attributes of a certain kind of freedom, this chapter considers the way in which this freedom can be put to work. The conquest of space, in the digital era, refers to the creation of a ubiquitous electromagnetic atmosphere – not merely extension across space, but also a “filling-in” of space, so that wherever one goes, the network can be accessed, information can be retrieved, and feedback generated. Information is generated not simply about the movement of objects, but about the movement of messages, and, recursively, the tracking of the movement of messages. Mobility, in this sense, participates in a productive spiral.
Writing in the waning years of the Space Race, James Carey (1992) located the rise of the electronic computer in a sequential chain of relationships between media and transportation: “As printing went with seagoing navigation and the telegraph with the railway, electronic and computer-based communication go with the space ship” (p. 171). Despite its element of truth – space ships rely on a variety of computerized systems – the observation is of a piece with its historical period, a more ballistic time when space travel and rockets captured the technological imaginary. Space has since given way to other final frontiers and the contemporary technological imagination is less caught up in the *Popular Science*, sci-fi imagery of *The Jetsons*, *Star Trek*, and other space odysseys than in the *Wired* techno-futurism of the information revolution. In this regard the attempt to make a grand equation between a new communication technology and a new form of transportation falls short. Electronic communication has arguably advanced much further than space travel in the intervening years. It is perhaps telling that, as of this writing, NASA’s budget has dropped to about one-half of 1% of the US federal budget from a high of more than 5% of the budget in the mid-1960s: a decline of one order of magnitude. The agency’s budget remains a fraction of the annual revenues of any one of a number of major information and communication technology companies, including Apple, Google, and AT&T, and only a tiny fraction of the whole sector. Space travel itself remains on the budgetary back burner, with occasional fleeting flare-ups about possible expeditions to Mars. Given the role it plays in satellite communication, space – or at least the orbital realm – has become more infrastructure than frontier.

Perhaps this is because space travel, unlike both of the earlier transportation technologies invoked by Carey – shipping and the railway – has not yet become integrally tied to the development of commerce. Despite the efforts of various entrepreneurs, transportation and exploration via “space ship” remain the province of mostly state-funded research and have yet to play a crucial role in the provision and sale of goods and services. The shift in the technological imaginary from the realm of rockets and jetpacks to that of Blackberries and iPads, however, does not undermine Carey’s deeper insight of the connection between technologies of communication and transportation. At the most basic level, the very notion of a medium implies the movement of a message through space and time, and, as a corollary, the spatial relations between communicators and messages. Thus, as Carey famously notes, for much of human history transportation and communication were identified with one another because messages traveled alongside people and things. The history of communication and that of human mobility, whether in the form of exploration, migration, or colonization, is tied up with that of communication. This connection is, as Carey notes, central to the pioneering work of Canadian communication scholar Harold Innis, for whom “communication, when considered in terms of the medium that facilitated it, might be seen as the basic staple in the growth of empire” (Carey, 1992, p. 157). To situate communication at the heart of empire is to foreground the relationship between mobility and control. Beniger (1986) further develops this connection in his study of the role played by communication technolo-
gies, broadly construed, in managing the “crises” of control associated with industrialization and the development of more rapid forms of production and distribution in the modern nation-state:

Although transportation and telecommunications infrastructures have also played crucial roles in the control of large territories since the Roman Empire, it is difficult to imagine consolidation of the modern nation state, over the nineteenth and early twentieth centuries, without the cultural integration made possible by parallel development of the first truly mass media: lithographic reproduction (1820s), photography and power printing (1830s), cheaper wood pulp publications (1850s), transatlantic telegraphic news reporting (1860s), illustrated daily newspapers and mass mailing (1870s), halftone photoreproduction (1880s), and finally broadcasting (1900s). (Beniger, 1986, p. 301)

Similarly, for Anderson (1983), communication and mobility have a combined role to play in the formation of the nation as an imagined community – a spatially dispersed, but shared notion of national community traveling, as it were, through time. Mass circulation media contributed to this shared sense of community, not least because people reading a daily newspaper could imagine themselves as part of a national audience they could not see in its entirety, but whose traces were discernable in daily life: “At the same time the newspaper reader, observing exact replicas of his own paper being consumed by his subway, barbershop, or residential neighbors, is continually reassured that the imagined world is visibly rooted in everyday life” (Anderson, 1983, p. 35).

The Relevance of Geography

These accounts share a preoccupation with the logic of control – an interest in the way communication helps reproduce social processes over time and space: “So central is communication to the process of control that the two have become the joint subject of the modern science of cybernetics, defined by one of its founders as ‘the entire field of control and communication theory, whether in the machine or in the animal’” (Beniger, 1986, p. 22; the reference is to Wiener, 1948, p. 11). Two of the main challenges posed to control – and thus to communication – are those of speed and distance: the ability to keep up with the expansion of social systems across territory and to monitor and manage social activity as it unfolds in time. The development of electronic communication technologies, which as Carey (1986) famously noted, break the identity of transportation and communication, addresses both of these challenges. Thanks to the speed of electromagnetic signals, these technologies allow for the coordination of distant activities – for the expansion of a societal “body” across space. As Carey (1986) put it, the communication technology functioned as, “in the favorite metaphor of the day [. . .] a thoroughly encephalated social nervous
Electronic communication technologies developed as a means of managing the “crisis of control” brought about by the acceleration of production and transport in the industrial era: the threat that the “musculature” might outstrip the systems for managing and controlling it: “Never before had the processing of material flows threatened to exceed, in both volume and speed, the capacity of technology to contain them” (p. 12). If information was going to help coordinate such processes, it would have to travel faster than the objects being controlled.

Thus, as Carey (1986) puts it, “The great theoretical significance” of the telegraph, “lay not merely in the separation [of transportation from communication] but also in the use of the telegraph as both a model of and a mechanism for control of the physical movement of things, specifically for the railroad [. . .] not only can information move independently of and faster than physical entities, but it also can be a simulation of and control mechanism for what has been left behind” (p. 215). The result, Carey argues, is the evening out of geographical difference – the differences that used to take time to cover. Geography made a difference that appeared in the register of time (at least for the purposes of market signaling that Carey discusses). A technology that allowed messages to cover time almost instantaneously had the effect of obliterating these spatiotemporal differences. Thanks to the development of electronic communication technologies, dispatchers could keep track of trains remotely just as stock traders across the country could track market prices in New York City. Geographic distance no longer mattered in the same way: “The telegraph puts everyone in the same place for purposes of trade; it makes geography irrelevant” (Carey, 1986, p. 217).

The newly achieved irrelevance of geography, Carey argues, opened up the speculative frontier of the future: space-based arbitrage (capitalizing on the difference between the prices of commodities in different locations) was replaced by futures trading. If time no longer served as a proxy for the differences associated with distance it could still project difference into the future. The notion of frontiers other than the spatial – than (outer) space itself – seems a more productive alternative to the chain of associations in which the telegraph gives us the coordinated rail system and the computer yields space travel. Carey himself provides an alternative to this formulation with the following observation (drawing on Melbin, 1987): “The notion of night as frontier, a new frontier of time that opens once space is filled is a metaphor, but it is more than that” (Carey, 1986, p. 228). He is referring here to the colonization of new times by commercial broadcasting: the long march of programming into the night. Since the time of his writing, we might expand this notion of new frontiers to include the colonization of new spatial “frontiers” by advertising and commercial media, whether these be the roofs of taxi cabs, the walls of elevators or health clubs, or the Web pages that we visit to access our email and search the Internet. Developments in the expansion of these new frontiers, both spatial and temporal, complement one another: increasing the time of exposure to commercially supported content and advertising requires reaching people in new locations. Exploiting new times means capturing new spaces.
If the telegraph signaled the moment when the identity between communication and transportation was broken, networked computing marks a form of reconciliation: communication can take place wherever we go.

From the perspective of commerce, this development marks a recovered relevance for geography. The goal of so-called contextual advertising on mobile devices including laptops and mobile phones, for example, is to be able to deliver marketing appeals in real time with geographic salience. To paraphrase Carey, the network puts everyone in their own place for purposes of consumption. If the telegraph separated communication from transportation in order to allow the former to manage the latter, the network, in a sense, makes communication reflexive: it provides information about where and when communication is taking place, and in so doing reintroduces the commercial relevance of geography. If Carey (1986) notes the impact of the telegraph as a homogenizing one that facilitates the “spread of a uniform price system throughout space so that for the purposes of trade everyone is in the same place” (p. 222), networked computing envisions the customization of pricing so that, for example, someone purchasing a Coke on a hot day from a vending machine in Arizona might have to pay a higher price than someone using a similar machine on a chilly day in Maine (Boyes & Melvin, 2009, p. 89). The mobility of information piggybacks on the movement of people in a productive spiral.

**Biased Media**

To speak of mobility within the context of media technologies and practices is to consider the circulation and control of both people and information, populations and messages. To return, once again, to the example of space travel, all of these concerns are embedded in Carey’s (1992) observation that “the delays in space exploration did not derive from deficiencies of rocket thrust. The real delay was the development of a system of communication that would allow space travel to be controlled from earth” (p. 171). The issue is not whether humans can be launched into space, but whether that can be done in a way that allows a society or culture to advance into this same space: that is, to maintain contact with the space travelers, to enfold them (even at a distance) within the embrace of the society that sent them off, and, finally, to incorporate the fruits of exploration into this society that originated it. By the same token, according to Carey (1992), “It was print and navigation that allowed European nations to burst the bonds of geography and spread into a ‘new world’” (p. 158). Mobility and communication go hand-in-hand to reproduce cultural and economic systems across space. The development of technologies for transportation and production goes hand-in-hand with that of communication technologies and practices: “Each new technological innovation extends the processes that sustain life, thereby increasing the need for control and hence for improved control technology” (Beniger, 2007, p. 310).
Control, in this context, need not refer to a particular type of top-down or authoritarian power, but rather to the effective management of social relations and, consequently, the process of social reproduction. Innis (1950, 1951) argued that communication systems can be characterized according to their varying abilities to manage culture across space and over time. His analysis invites us to think about the material characteristics of media technologies: are they “light” and portable enough to allow standardized transmission across space? Are they durable and compelling enough to reproduce their messages over time? Imperial expansion relies upon communication practices that allow for accurate accounting for and management of far-flung bureaucratic systems; its durability depends upon practices that foster a commitment to the reproduction of social relations over time. For Innis, the rhythm of the rise and fall of empires and spheres of influence corresponds to various shifts in the warp and woof of time and space management: the ability to convey control across space and to reproduce social relations and the systems of knowledge and practice that sustain them over time. Thus, for example, his account of Egypt’s middle kingdom traces shifts that undermine control over space:

A decline of centralized bureaucratic power and a shift from an emphasis on control over space reflected in the pyramid to a decentralized bureaucratic power with an emphasis on continuity and religion to be seen in the spread of writing and the use of papyrus, the extension of magical formulae from the hieroglyphic of the pyramids to that of papyrus, from the king to the people weakened control over space [. . .] (Innis, 1950, p. 95).

The interplay of control over space and time corresponds, for Innis, to the interplay of media technologies and their abilities to facilitate one form of control or the other: “Concentration on a medium of communication implies a bias in the cultural development of the civilization concerned either toward an emphasis on space and political organization or toward an emphasis on time and religious organization. Introduction of a second medium tends to check the bias of the first and to create conditions suited to the growth of empire” (Innis, 1950, p. 216). The balance is disturbed when the dominant tendency of a particular medium goes unchecked – as in the case of the bias of electronic media toward instrumental reason, abstraction, and bureaucratic administration. For Innis, the character of a society is, to an important extent, shaped by the characteristics of the dominant media practices and technologies. As Carey (1986) puts it, “In propositional form, then, structures of consciousness parallel structures of communication” (p. 161).

But Innis’s account is also a critical one: an emphasis on the binding of space via the high-speed transmission of messages across long distances, and the consequent development of technical communication associated with the management of economic relations at a distance, tilt the balance toward the political and bureaucratic. There is a narrative of decline embedded in Innis’s description of the eclipse of concerns of time by those of space: “Innis characterized modern Western
history as beginning with temporal organization and ending with spatial organization. It is the history of the evaporation of an oral and manuscript tradition and the concerns of community, morals, and metaphysics and their replacement by print and electronics supporting a bias toward space” (Carey, 1992, p. 160). There is a familiar critique of mobility at work in this narrative of decline: not just a loss of rootedness or grounding, but a concern with the homogenization and instrumentalization of space that has come to characterize contemporary critiques of capitalist globalization. Accounts of the culmination of what Marx (writing in the era of the telegraph) described as “the annihilation of space by time” invoke a sense of loss: not only of the distinctness of geographic difference, but of the time for reflection associated with difference. As Paul Virilio puts it, “We’re heading towards a situation in which every city will be in the same place in time. There will be a kind of coexistence, and probably not a very peaceful one, between these cities which have kept their distance in space, but which will be telescoped in time” (as quoted in Armitage, 2000, p. 11).

The ambiguity in these accounts – is it space that is annihilated (and temporal distance preserved) or time that is telescoped (while distance is maintained) – is structural: the goal of instant communication across space is the elimination of temporal difference and delay. The rapid transit of messaging across space is associated with a collapse of the future into the present: a process of simulation incorporates the anticipation of future markets into current transactions. Consider, for example, the spread of futures markets or so-called decision markets from the realm of finance to those of politics, medicine, national defense, and even meteorology. There is nothing new about speculation per se, but the migration of so-called decision markets into the realm of policymaking marks an attempt to telescope time – to translate the future into the present for the purpose of governance. In this regard, the so-called War on Terror with its goal of comprehensive, preemptive monitoring of the flows of people, capital, and information, marks the logic of warfare in an era of so-called “time-space compression” (Massey, 1994, p. 22). Victory in such a war cannot be defined after the fact, as in the case of the movement of troops on a battlefield, but only in terms of comprehensive preemption.

In each of these spheres, standardization and interoperability render the control and signaling process effective and comprehensive. As Douglas (1997) puts it, “The importance of not only predicting the future, but attempting to shape it, necessitates a greater form of synchronicity between the levels of society, institution, or firm” (p. 167). Globalization, to continue along the tracks of Carey’s train of thought, is attendant upon the development of a communication system that allows for the comprehensive management of global mobility: of messages, people, things, and capital that not only move through coordinated interactive networks, but generate information about themselves as they go. This redoubling of mobility is at the heart of the productivity of the information society and contributes to a de-differentiation of communication and transportation: mobility becomes a form of communication; motion, as it were, expresses itself.
Mobility is not necessarily always aligned with productivity. What Beniger (1986) describes as the “Neolithic revolution,” which was characterized by the first permanent settlements, countered the mobility of nomadic life with the productivity of animal husbandry and agriculture. Fixed settlements coincided with production technologies that could generate a surplus thanks to “the refinement of stone tools and the domestication of plants and animals” (Beniger, 2007, p. 302). If such settlements relied on the time-binding character of the oral tradition, over time this was supplemented by forms of representation and communication of the “heavy and durable” type Innis (1950) associates with the bias of time: clay and stone tablets, architecture, the pyramids, and so on. As forms of fixed settlement prosper, they tend to expand. Prosperity combined with the development of transportation technology ranging from the construction of roads to the development of navigation techniques come to underwrite trade and cultural expansion and hence the need for portable, “lighter” forms of communication. Lightness does not simply refer to weight, but to ease of transport and accessibility. In the end the operative distinction for Innis is not simply a material one between, say, heavy clay tablets on the one hand and portable forms of papyrus on the other, but also a sensory one between the ear and the eye: between those forms of communication that rely upon and are conducive to rituals of personal communion and those that facilitate abstracted forms of long-distance management and control. Thus radio – what Ong (1988) describes as a form of secondary orality – finds itself on the side of the technocracy, not necessarily because it is fleeting and evanescent, but because, like the printing press, it addresses “the world instead of the individual” (Innis, 1950, p. 190). Innis’s own bias was toward the oral and the ecclesiastical, with their role in the development and enrichment of culture over time: “The oral discussion inherently involves personal contact and a consideration for the feelings of others, and it is in sharp contrast with the cruelty of mechanized communication and the tendencies which we have come to note in the modern world” (Innis, 1950, p. 191).

It seems fair to say that if the history prior to the arrival of the printing press in Europe is characterized by an ongoing tension between media of space and media of time, between the expansion of empire and the durability of the ecclesiastical, the advent of print capitalism creates the fundamental imbalance that leads to Innis’s indictment of Western civilization. Developments in navigation and shipping associated with “The Commercial Revolution, following exploration of Africa, Asia, and the New World” (Beniger, 2007, p. 303) combined with the emergence of a medium for the mass production of print to set the stage for a shift to productivity of mobility and the management of space. For Innis (1950), “The discovery of printing in the middle of the fifteenth century implied the beginning of a return to a type of civilization dominated by the eye rather than the ear” (p. 138).
With the rise of mercantile capitalism and eventually industrialization, the circulation of people and goods came both to depend on and to facilitate the circulation of information enabled by technological developments in transportation and manufacture: “The Industrial Revolution followed the printing industry and in turn in the nineteenth century, with the use of steam power in the manufacture of paper and of printed material, supported rapid expansion of the printing industry” (Innis, 1950, p. 139). Douglas (1997) notes that Mumford traces the emergence of a “new era of generalized mobility” back to the sixteenth century: “The ‘new spirit of society,’ he argues, ‘was on the side of rapid transportation [. . . t]he hastening of movement and the conquest of space [. . .] Mass, velocity, and time were categories of social effort before Newton’s law was formulated’” (p. 168). For Mumford, capital, in the form of money, can be firmly located on the side of “lightness”:

as the emphasis upon money grew in part out of the increasing mobility of late medieval society, with its international trade, so did the resulting money economy promote more trade: landed wealth, humanized wealth, houses, paintings, sculptures, books, even gold itself were all relatively difficult to transport, whereas money could be transported after pronouncing the proper abracadabra by a simple algebraic operation on one side or another of the ledger. (Mumford, 1963, p. 24)

Capitalism in its various forms relied not just on improved technologies for the transport of raw materials and finished products but also on mobility of people associated with colonization and internal and external migration. For Innis (1950), the result was a kind of permanent if productive imbalance: “Constant changes in technology particularly as they affect communication [. . .] increase the difficulties of recognizing balance let alone achieving it” (p. 140). For Beniger (1986), the result was a series of crises of control that helped drive the development of increasingly efficient forms of communication and feedback-based management. Whereas Beniger (1986) paints a portrait of a rhythm of crisis and control, Innis’s picture of constant imbalance is perhaps more compelling: new technology facilitates increased speeds of production, circulation, and consumption leading to perpetual crisis and breathless acceleration. Computers not only monitor the movements of people, commodities, and capital, but also facilitate their increasingly rapid circulation. As Douglas (1997) notes, control of movement gives way to speed – and acceleration: “The difference is but one of degree: in late modernity the ‘problem of movement’ is substituted for what Paul Virilio has termed the ‘movement of movement’ (speed)” (p. 170) and hence, the capture and monitoring of movement.

Mocio-Economics

If the logical endpoint of acceleration is instantaneity, this is not quite the same thing as stasis or the obliteration of location and the consequent irrelevance of geography.
Once upon a time, the vision of stasis was a wired fantasy of the futurists: that the network could virtualize mobility, rendering its physical counterpart a matter of choice. Taken to its limit, telecommuting would be subsumed to so-called “virtual workspaces” (Pruitt & Barrett, 1991) – virtual reality suits that would allow us to roam the world and interact with others without leaving the privacy of home. This was seen as a “green” development: pollution and costs could both be reduced by replacing physical transportation with virtual mobility: commuting would be replaced by telecommuting, conferencing by tele-conferencing, education by distance learning, and so on.

The disappearance of personal contact (at least in its face-to-face version) associated by Innis with space-biased media is taken to an extreme. Aside from the somewhat alienating vision of a world in which mobility is virtualized, the prospect of a trade-off between virtual and physical mobility runs counter to the productive logic of mobility. The compression of space enabled by new transportation and communication technologies corresponded to dramatic increases in its consumption as travel became a consumer good. At the start of the twenty-first century the US National Academy of Engineering praised the dramatic increase in the mobility of the nation’s population as one of the greatest achievements of the previous century: “In 1900 the average American traveled about 1,200 miles in a lifetime, mostly on foot, and mostly within his or her own village or town. By the end of the century, the typical American adult would travel some 12,000 miles by automobile alone, in just one year” (National Academy of Engineering, 2000).

This dramatic increase reflected a feat of production engineering – of highway building and automobile making, of designing and constructing the infrastructure for suburban sprawl and shopping malls – but it also represented a crucial spatial component of the dramatic increase in levels of consumption and production associated with twentieth-century consumer society. What Lefebvre (1991) described as the “productive consumption” of space associated with increased mobility helped to stimulate a productive spiral: suburbanization and its associated technologies of mobile and static privatization increased demand through spatial dispersion. Each household served as the repository for a private set of appliances that displaced or replaced forms of collective consumption: the automobile displaced the trolley, the radio the concert hall, the TV set the downtown movie theater, and so on. Eventually these personalized media would go mobile, in the form of the transistor radio, the car VCR, and eventually, the mobile phone, the laptop computer, the iPad, and so on. The disaggregation and individualization of consumption, communication, and transport helped to absorb the goods produced by an increasingly rationalized and efficient industrial sector. The close connection between individualized media devices and transport is indicative: communication technologies piggyback on the productive spiral of the consumption of space. As mobility becomes coupled with communication, the combination of portability and functionality generates a proliferation of media commodities and devices: LPs give way to cassettes and then to CDs, mini-disks, and eventually MP3 players (at which point the commodity
becomes so mobile that its status as a commodity is threatened). This progression is paralleled by the development of car radios, 8-track tape players, cassette decks, and iPod ports.

The sheer number of devices – many of them portable and individualized – associated with media consumption in the new millennium dwarfs the technological range of devices available only a generation earlier. Whereas a middle-class family a few decades ago might have kept the same phone for 15 or 20 years, these days the half-life of a mobile phone is only a matter of a few months. The same household may have had only one or two extensions for the whole family, rather than one (or more) mobile phones per person. The same might be said of computers, which are typically upgraded every few years and are becoming increasingly individualized as they become more compact and portable. The advent of so-called cloud computing means that laptops are becoming tethered by the Internet to ever-evolving applications that require constant updates and hardware upgrades. Our relation to what once might have been considered consumer “durables” takes on the character of a flow: an accelerated rhythm of upgrading, consuming, and discarding.

The multiplication of personal devices enlists the industrial-era promise of individuation as redress from (and ruse for) rationalization. Suburbanization offered an escape from urban congestion as surely as it served as a form of sorting, exclusion, and differentiation. Similarly, the interstate highway system mobilized the myth of the freedom of the road while simultaneously channeling movement through certain areas and around others. As Deleuze put it, “People can drive infinitely and ‘freely’ without being confined yet while still being perfectly controlled” (quoted in Allon, 2001, p. 20). From the very inception of mass society, the promise of differentiation, of freedom – in short, of an escape from its own stultifying homogeneity – has served as one of its guiding marketing strategies (Marchand, 1986).

As media critics have argued (including Barney, 2000; Robins & Webster, 1999), the so-called revolutionary promise of new interactive media represents not a radical departure from this strategy but an extension of its logic. The development of so-called “m-commerce” continues the strategy of mobility based differentiation, specification, and customization. Short for “mobile commerce,” the term has been championed by the publicists of the wireless Internet, and the range of mobile, interactive, networked devices it enables. The prospect of data-driven mass customization based on continuous, real-time monitoring of consumers continues to be held out as one of the potential killer applications of wireless, portable media and is being pursued by m-commerce entrepreneurs and social networking sites. The metaphor align left cyberspace has, in this regard, come full circle. Thanks to portable, interactive devices, one can leave one’s home without leaving the flexible, interactive, and customized world of cyberspace. To the extent that the elastic boundaries of cyberspace stretch beyond the confines of the home or office to contain the physical motion of the mobile consumer, this motion becomes the real-world, physical analogue of “surfing the Web.” The promise of wireless networked technology, from the standpoint of m-commerce, is thus to inscribe the productive spiral of spatial
dispersion into the interactive economy: not to minimize mobility but to redouble it in virtual form.

Consumers’ motions through space open up new informational dimensions that can be used to further facilitate the consumption of space and the spatialization of consumption. Murdock (2006) has described new forms of “mobile consumerism” in which the solution to fostering new forms of marketing in an era of information glut “is to release commercial promotion into the environment integrating it into a range of cultural forms and employing interactivity to increase consumer engagement” (p. 27). Networked mobility enabled by the spread of wireless networks contributes to the productive spiral of mobility with a proliferation of portable individualized devices that enable the increasing specification and differentiation of consumers. Because these devices are portable, they become attached to particular individuals rather than fixed addresses (as in the case of desktop computers or terrestrial phones). Because they are interactive, they render geography both irrelevant in some respects and increasingly relevant in others: any space with access to a network can become a site for communication and information access, production, and sharing. The result is the de-differentiation of sites of labor, recreation, and domesticity: one can work from home, a café, the airport, a commuter train, or a public park. By the same token, workers can multi-task in the work place, conducting aspects of their social and family lives via mobile phones and email – where this is permitted or where restrictions are not effectively enforced. Different realms of social life come to rely on the same tools: mobile phones and laptops are used for both professional and personal purposes. Because these can accompany their users throughout the course of the day they are no longer location or task specific.

At the same time, for the purposes of commerce and consumption, location becomes an increasingly important demographic variable. Contextual advertising can target users based on the time-space paths they take through the course of the day in combination with other behavioral and demographic information. The advent of mobile commerce via interactive devices has spawned the neologisms “mocio-economics” to describe the “effects of mobile phone usage on human behavior, society and lifestyle in the twenty-first century” and “mobilology to refer to the study of the use of mobile phones” (Mobilium, 2010). Even as these technologies contribute to the rationalization of consumption described by Beniger, they are promoted for their contributions to personal expression and convenience: “Mobilology addresses the ways consumers personalize their wireless and mobile lifestyles, how they use their mobile technology to innovate their self-expression, and how they use their mobile phones and devices to facilitate increasingly mobile lifestyles” (Mobilium, 2010).

Similar technologies facilitate strategies for flexible and mobile production, keeping track of products, raw materials, and employees as they move through the supply chain. The advent of interactive forms of production helps blur distinctions between production and consumption: consumers can participate in creating customized
goods and services that they then pay a premium to consume. The recursive character of interactive forms of mobility allows consumers to generate information about their own movements and actions: they communicate information about their communication practices and behaviors. Spatial customization thereby serves as an incitement to the consumption of space as a form of productive subjectification. In contrast to the bourgeois interiority associated with the location of authentic subjectivity in the intimate realm of the home, subjective expression is projected outward through the consumption of space. The invitation of m-commerce is to specify one’s individuality through motion.

It should be noted in advance that the consumption of space as a means of individualization is, in general, a form of consumption limited to affluent groups (as is the promise of individuation through the consumption of customized goods and services). As Morley (2000), quoting Doreen Massey, observed, the mobility of affluent classes is “quite different from the mobility of the international refugee or the unemployed migrant as a social experience” (p. 200) – not to mention the immobility of groups of people unable to relocate from regions of poverty, famine, and warfare. Nine-to-five clock punchers are replaced by a flexible, temporary workforce. At the bottom end of the economic scale, this implies the ability of capital to seek out low-wage workers around the world and to draw on the labor of low-paid immigrants (many of whom, despite predictions of postindustrialism and the demise of disciplinary society, continue to work in “old-fashioned” sweatshops). At the high end, it refers to “always-on-call” professionals who carry their work with them as they travel the globe and who move from company to company with an increasing degree of frequency: “Work anywhere anytime is the new paradigm [. . .] It amounts to a massive disaggregation of work, spinning outside the walls and confines of the traditional office” (Hamilton, 1996, p. 106).

Echoing Foucault (1978), it is tempting to observe that the bourgeoisie have endowed themselves with a “garrulous mobility” – one that permeates the ads for cell phones, cruise lines, and SUVs – and that just as there is a bourgeois form of monitored mobility, there are also class mobilities (subject to rather different forms of surveillance). The intersection of spatiotemporal paths can be used as hieroglyphic representations of particular kinds of social interactions. In keeping with the logic of convergence, these hieroglyphs, inscribed not in stone, but in space, serve double duty as feedback for the rationalization of production and policing. There is not a complementary balancing of time and space, but rather a collapsing of one extreme into the other. The lightest of media, electromagnetic, wireless forms of communication rely upon ponderous “server farms”: buildings the size of several football fields filled with the infrastructure for cyberspace. The most ephemeral of actions, a passing interest, an impromptu detour through the city, are captured by and live on in the database, retrievable via algorithm for years – perhaps indefinitely as the cost of storage decreases in proportion to the exponential growth of processing power. The proliferation of forms of neo-orality including voice messaging and text messaging do not necessarily counter but perhaps coincide with the “cruelty of
mechanized communication” (Innis, 1951, p. 191). Increasingly, the conventions of personal communication are incorporated into forms of personal broadcasting on blogs, social networking sites, and text-messaging feeds that, like radio, “address the world instead of the individual” (Innis, 1951, p. 191). The conquest of space, in this context, refers to the creation of a ubiquitous electromagnetic atmosphere – not merely extension across space, but also a “filling-in” of space, so that wherever one goes, the network can be accessed and information can be retrieved, and feedback generated. Information is generated not simply about the movement of objects, but about the movement of messages, and, potentially, the tracking of the movement of messages. The interactive information generated by interactivity within this electromagnetic medium is without horizon: it echoes the bad infinity of capitalism itself: production for production’s sake.

NOTES

1 Although the essay in which the quote appears was originally published in 1989 (based in part on a 1981 tribute to Harold Innis), the quote itself, unsurprisingly, dates back to an earlier essay, “Canadian Communication Theory” (Carey, 1975), published in the last year of the Space Race (the year of the Apollo–Soyuz Test Project).

2 However it is worth pointing out that, in Empire and Communications, published a year earlier than The Bias of Communication, Innis pits radio against print: “The bias of paper towards an emphasis on space and its monopolies of knowledge has been checked by the development of a new medium, the radio” (1950, pp. 216–217).

REFERENCES


