Preserving Digital Narratives in an Age of Present-Mindedness: the View from Toronto

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With the emergence of the Internet and other digital, instantaneous communication media, we have witnessed an exponential increase in the speed of information transmission. While many contemporary observers laud the unprecedented velocity with which it is now possible to share information across the globe, more pressing, yet generally overlooked questions lie before us concerning the related and pervasive cultural neglect of time – what the Canadian communications scholar Harold Innis (1951: 76) called the "obsession with present-mindedness." In a cultural milieu wherein speed is fetishized and historical thought itself has been marginalized, I contend that one of the gravest challenges facing efforts to preserve digital narratives proceeds not from technological limitations, but rather from capitalism's systemic imperative toward social, economic and technological acceleration, and the associated cultural lack of interest in the problems of duration.

In exploring this argument from a communications perspective, it is instructive to consider the contributions of so-called medium theory, as developed by Harold Innis, Marshall McLuhan and other communications scholars of the "Toronto school." Medium theorists look to the structural properties of different media when trying to assess their social, political, and psychological implications; in other words, media are viewed not simply as neutral channels for the transmission of information, but rather as "environments in and of themselves" (Deibert, 1999: 273). Raymond Williams (1973: 4), albeit not a medium theorist, described the influence of the material conditions of any system as "the setting of limits and exertion of pressures." This expression conveys admirably the dialectical relationship between a medium of communication and the character, cognition, and cultural traits of the society in which it operates.

The importance of studying the structural properties of communication media when trying to assess the threat posed by the cultural neglect of time and duration to the preservation of digital narratives stems from the media's capacity to directly intervene in the structuring of time-space relations. According to Harold Innis, depending on its structural characteristics, each medium militates in favour of the formation of some mental habits, structures or biases, and by extension, certain orientations to action against others (Innis, 1950; 1951). Innis was particularly interested in the influence of communication media on how different civilizations apprehend and organize themselves in terms of time and space – the two fundamental indices of human experience. One of the most important heuristic devices he developed over the course of his communication studies was that of "media bias," namely the notion that, given their structural capacities, media tend to privilege, or be biased towards, either time or space. Media that are relatively intractable (e.g. stone carvings), difficult to transport, durable, and that are limited in their capacity to store information were deemed by Innis to be time-biased because they support and induce time-biased cultures, characterized as traditional, ceremonial, religious, and geographically confined. Media that are relatively easy to use and transport, and that have an abundant capacity to store information but are not durable (e.g. paper) were considered by Innis to be space-biased. Such media give rise to, and support, space-biased cultures, which Innis characterized as "secular, present-minded, and intent on territorial expansion and administration of vast territories" (Babe,

2004: 384). According to Innis, the general trend in innovation, i.e. toward ever "lighter" and more ephemeral communications technologies that are highly efficient over distances but of short duration contributes to a lack of interest in problems of duration – what he called the "obsession with present-mindedness" characteristic of modern Western culture.

In recent years, the pervasive cultural neglect of time that so troubled Innis has been taken up by an growing number of scholars. Theorisations of profound changes in the social dimension of time wrought by the ICT revolution, including Manuel Castells' (1996) "timeless time," David Harvey's (1989) "time-space compression," Anthony Giddens' (1990) "time-space distanciation," and James Gleick's (1999) notion of the "acceleration of just about everything," form part of an impressive body of "time literature" which demonstrates that we live in a "high-speed" society in which core social, political, and economic processes are undergoing dramatic rates of acceleration (see Hassan, 2009; Rosa, 2009; Tomlinson, 2007). Virtually all of the scholars of social acceleration agree on the central role played by capitalism in driving the process of social acceleration. Likewise, from a medium theory perspective, one cannot evaluate the impact of new time-and-space annihilating technologies, including new media, without also examining the material foundations of society involving its means of production, distribution and consumption as well as the structured relationships related to them. In the capitalist world order, David Harvey (2000: 98) identifies two incessant drives: the drive "towards the reduction if not elimination of spatial barriers, coupled with equally incessant impulses towards acceleration in the turnover of capital." In the words of Marx, commenting on the capitalist impulse to revolutionize the means of transportation (themselves media of communication, broadly conceived), capital must "strive to tear down every spatial barrier to...exchange, and conquer the whole earth for its market" and reduce capital turnover time to "the 'twinkling of an eye'" (Marx, 1973: 538-9). Marx could already see that the spread of railways, telegraph and steam navigation would tend to accelerate the means of communication and transport through the periodic bouts of "annihilation of space by time" (Rosenberg, 2005: 21-22). To put it plainly, capitalism loves speed because, as Ben Franklin put it over two centuries ago, time is money.

The capitalist imperative to increase control over space and reduce capital turnover time has been structured into the dominant media of communication. Historically, as it became easier to communicate more quickly over large geographic spaces (thanks to the printing press, followed by the telegraph, telephone, TV and now the Internet), the temporal norms of society underwent profound modifications. The speed of life, defined by the European sociologist and scholar of time Harmut Rosa (2006: 448) as "the number of individual episodes of action and/or experience per units of time" has generally accelerated. Notions such as "saving time," having no time, running out of time, or being "up with the times" have been gaining ever greater currency in our increasingly time-strapped culture (Lubrano, 1997: 120).

Which brings us to our key question, namely what are the implications of the process of social acceleration, and the associated cultural neglect of time, for the contemporary efforts to archive and preserve digital narratives, including websites, blogs, and other online texts and documents? In the context of the "developed" world in the early twenty-first century – the so-called "age of information" – the Internet plays a key role in deepening the prevailing preoccupation with spatial expansion, organization and control through shrinking time frames. Dubbed by Todd Gitlin (2001: 76) as "the latest speed demon," the Internet works to obliterate time as it is being

structured to serve the interests of what Ben Agger (2004) calls “fast capitalism.” In this light, the Internet can be understood as what Innis would refer to as a spatially biased medium. Through it and other digital, instantaneous new media , the predominant ways of thinking and acting of more people in more parts of the world are becoming increasingly preoccupied with immediate or relatively short-term concerns. The ability to transmit and receive information from almost any part of the world instantaneously has been accompanied by a growing neglect of duration: as Innis recognized, to the extent that a medium excels at controlling space, it is generally less efficient at controlling time.

One important manifestation of this tendency is the astounding ephemerality of information disseminated on the Web. In applying the Innisian perspective to the Internet, Frost (2003) points out that, although the Internet's infrastructure itself is robust, the messages transmitted online are highly perishable and can be eviscerated with the push of a button, making Internet a relatively space-biased medium. Much evidence exists to support this argument. According to web archivist Brewster Kahle, the World Wide Web has a “memory” of about two months (cited in Brand, 1999: 48). Materials published on the Web that derive from professional sources, such as libraries or databases, have their analogues elsewhere; this ensures that they will still be available even after they vanish from digital view. Other kinds of digital documents, however, tend to “appear on the web for a matter of days, to disappear in the twinkling of an eye, the flash of a pixel” (Deegan and Tanner, 2002).

As with other structural properties of the Internet, the ephemerality of web content should be understood in the context of the systemic imperative toward an acceleration of production, distribution and consumption. The technologies used to archive digital data face high rates of obsolescence because most companies have little economic incentive to develop lasting data storage solutions. While archives, including the volunteer-based efforts of the archive team itself, could also potentially provide a solution to the problem of obsolescence, there is very little economic incentive for archives (Brand, 1999). As a result, creators or original collectors of digital information are rarely motivated, or rarely possess the skills to preserve their material. Some long-lived organizations such as libraries, universities, and government agencies, or non-profit organization like the Internet Archive and its Wayback Machine (archive.org) or the Archive Team (archiveteam.org) attempt to pursue this task, but, as Brand observes, they frequently lack the mandate or the funding to do so. Digital obsolescence and what Deegan and Tanner (2002, np) identify as the “continually accelerating rate of replication, adaptation and redundancy of hardware, software and data formats and standards” serves the corporate interest by helping to speed up the production, distribution and consumption of digital technologies.

According to Kenneth Thibodeau, who oversees electronic archiving for the National Archives in the U.S., the task of of preservation would be much easier if software companies committed to open standards that remain fairly constant; however, “the market drives innovation and differentiation from competitors” (for example, Microsoft perpetually invents new formats to handle new features, making it increasingly difficult today to open a Word file from 1994) (cited in Cosgrove-Mather, 2003). Thibodeau's observation underscores the fact that, faced with the pressures of “turbo-capitalism” (Luttwak, 1999), information technology companies perpetually have to innovate their products – and the upgrades themselves, of course, are supposed to make computers and the capitalist system that relies on them run faster and more efficiently, contributing to the general speed-up and exacerbating the cultural neglect of time and duration.

Software entrepreneur Charles H. Ferguson has referred to the Internet as “a self-accelerating machine” (cited in Gitlin, 2001: 76-7). He observes that the “phenomenon of 'Internet time,' the ultrafast development cycle that characterizes the entire Internet industry, is in large part a consequence of using the Web to distribute and receive information and technology about the Web, including software, specifications, documentation, source code, and comments from users” (ibid). This acceleration in the rates of obsolescence privileges capitalist vested interests to the detriment of time, continuity, and preservation.

For Simons (2006), the fact that as technology for writing becomes more advanced, the products of writing generally become less durable represents “one of the great ironies of our age.” Echoing Innis, Simons points out that clay and stone used thousands of years ago to record important information lasted thousands of years, and that the parchment used hundreds of years ago lasted hundreds of years. Even acid-free paper has proven to last for centuries. Today, digital technologies, including both hardware and software, are changing so rapidly that a typical storage medium or file format is obsolete within five to ten years. Indeed, given the accelerating rates of obsolescence and ephemerality of the Internet and related technologies, “there has never been a time of such drastic and irretrievable information loss as right now” (Simons, 2006).

The absence of archives in a context of growing amounts of obsolete data suggests that we are now living in a period that may prove “a maddening blank” to future historians – a digital Dark Age – because almost all of our art, science, news and other records no longer have lasting, physical analogues, being directly created and stored on media “that we know can't outlast even our own lifetimes” (cited in Brand, 2003: 48). Hillis believes that “the real problem is not technological. We have the technical understanding to solve problems such as digital degradation. What we don't have yet in our digital culture is the habit of long-term thinking that supports preservation” (ibid).

Hillis' insightful comment supports the central argument of this paper by directing us to consider the ways in which the obsolescence of digital data, especially on the Web, both reflects and perpetuates a cultural tendency toward the neglect of duration. Because it provides a way to constantly update information, the Internet is perpetually rendering obsolete the information we already have, exacerbating the problem of impermanence and “obsessive present-mindedness” that Innis associated with modern media. As Brand (2003: 38) warns, “the price of staying perfectly current is the loss of cultural memory.”

The evisceration of cultural history and memory already can be observed in relation to members of the younger generations, many of whom exhibit an appalling lack of historical knowledge (see Bauerlein 2008). Having access to historical texts and materials is of course requisite for gaining this awareness, which is just one reason why the ephemerality of today's cultural texts is so disturbing. However, mere access is not enough in a cultural milieu wherein historical thought itself has been marginalized. Given what is perhaps an unprecedented emphasis on the present and immediacy, there seems to be no observable incentive or interest to learn the lessons of the past; indeed, it is highly revealing that more and more people today use the the expression “that's history” derisively, as a put-down. From the Innisian perspective, this tendency is directly related to the neglect of long-term thinking prevalent in our “culture of speed” (Tomlinson, 2007). To the extent that the digital, instantaneous new media ubiquitous in contemporary Western society are conducive to speed and spatial control, they make it relatively difficult to hold onto a sense of historical continuity.

To be clear, it is undoubtedly true that despite the strong space bias structured into them by vested capitalist interests, digital media hold the potential to democratize access to archived material and to serve as an external memory storage, relieving the burden placed on human biological memory. Nonetheless, the argument advanced here is that, in the continued absence of both economic as well as popular interest in the long-term, it appears increasingly likely that digital media are leading to 'digital amnesia' and the associated loss of our shared cultural heritage. **The ongoing problems with the BBC's digital Domesday Project and the decision of the *New York Times* editor at the time to create a millennium Times capsule using archival-quality paper based on his view that "If your aim is to have something lasting 1,000 years from now, you can't plan on electronics doing the job" (cited in Cosgrove-Mather, 2003), are just a couple of the better-known examples illustrating my point.**

To conclude, my purpose here was not to argue in favour or against any of the extant technological fixes proposed as a solution to the impending threat of a 'digital dark age' (for some of these solutions see Conway, 1996; Bollacker, 2010). Instead my aim has been more modest and at the same time more overarching, namely to highlight the broader set of socio-cultural conditions that shape in profound yet largely unrecognized ways how we think and organize our society and our culture in the dimension of time. While archivists and librarians continue to grapple with issues of migration and standards, if we are indeed intent on preserving our cultural heritage for future generations, it is up to all of us to reflect upon the unconscious temporal biases perpetuated by our beloved, high-speed, digital new media.

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