HUMAN TECHNOLOGY

An Interdisciplinary Journal on Humans in ICT Environments ISSN: 1795-6889

www.humantechnology.jyu.fi Volume 15(2), June 2019, 293–299

BOOK REVIEW

Marshall, Jonathan Paul, Goodman, James, Zowghi, Didar, & da Rimini, Francesca (2015). *Disorder and the Disinformation Society: The Social Dynamics of Information Networks and Software.* London, UK: Routledge; 310 pages.

Reviewed by

Raul Pertierra
Philippine Womens' University Manila the Philippines

At a recent conference, an anthropologist commented that what was good about culture was that everyone has it—and that is the problem! The same may be said about information: Everyone has it and that is the problem! The book under review attempts to examine and unravel this paradox.

According to Bruno Latour (2014), humankind is now in the Age of Anthropocene, where human activity is the main shaper of the physical and social environment. Exactly when this age began is difficult to ascertain. It may have begun 500,000 years ago, when fire was first employed, or 10,000 years ago, when crop cultivation and animal husbandry became common practice. Some anthropologists date this age to the first water pump (1710), at the start of the Industrial Revolution. In any case, it now seems clear that human activity is the main determinant of the physical and social environments. A consequence of this is the increasing unpredictability of the future, as human intervention becomes a major factor in shaping it. The Age of Anthropocene must now include informationalism as the major source of intervention in the modern world. These interventions are the basis both of order and disorder in the present.

If the printing press marked the beginning of an informational society, more recent developments have multiplied its significance. Indeed, some writers are claiming that the Internet and new media have opened revolutionary paths to human development hitherto unknown. According to Barlow (1995, p. 36), "With the development of the Internet, and with the increasing pervasiveness of communications between networked computers, we are in the middle of the most transforming technological event since the capture of fire. I used to think that it was just the biggest thing since Gutenberg, but now I think you have to go back further."

A similar claim was made by Pierre Levy (2011, p. 4): "I would therefore claim that we are approaching the dawn of a new civilization whose explicit aim will be to perfect collective human intelligence, that is to say, to pursue indefinitely the process of emancipation into whose path language has thrown us. If I have worked so hard at understanding the significance of cyberspace,

DOI: http://dx.doi.org/10.17011/ht/urn.201906123160

it is because it seems to me to be the most up-to-date tool available for improving our collective intelligence, the most recent path discovered for opening up our possibilities of collective choice."

According to Masuda (as cited in Ling, 2009, p. 3), the Internet "will crystallize participatory democracy and result in a rich symbiosis of god and man, without the compulsion of power or law but by the voluntary cooperation of citizens." Others make equally promising claims: "The Internet is the greatest revolution since the invention of the automobile except that its growth is 40 times faster. The Internet is the greatest invention of the century, if not ever.… The Internet is the greatest invention since the wheel" (Katz & Rice, 2002, p. 2). These millenarian expectations have so far been unfulfilled. Instead, a more sober, cautious, and even Luddite assessment of the digital world is emerging. The book under review presents an antinomian view of the current situation - information is its own aporia.

While the views above may be considered excessively optimistic, there is little doubt that humankind has entered a new era of informationalism. The promises of the new communication media tend to stress the benefits but downplay the negative aspects of the new technology. While the ability to communicate is generally beneficial, this assumes that people have control over who, what, when, and why they communicate. In reality, this control often is beyond most users, and instead the old power structures benefit by the ability to influence, shape, and keep track of people's activities, particularly their digital meanderings. In a culture where consumption is an integral part of identity formation, the state and capital stand to gain more from the advances in communication then most individual users.

The authors of the book, *Disorder and the Disinformation Society: The Social Dynamics of Information Networks and Software*, argue that one must question who controls communicative structures and for what purposes. People's lives increasingly depend on a world generated by media images and practices, but what interests motivate these images and practices? Do the new media encourage or do they constrain the democratization of everyday life? Is it possible to remain incommunicado in a social environment that increasingly instigates always staying in touch?

Moreover, communicative practices take place in a world marked by virtuality and radical alterities. Increasingly, people communicate with absent others, including nonhuman interlocutors. While technologically mediated communication often mimics face-to-face talk, its consequences are often radically different and unpredictable. Earlier boundaries separating culture from nature are transcended technologically. The Anthropocene and Informational Ages mark the domination of culture over nature.

These authors critically examine the basis of order in the so-called information society. As societies become more complex, the requirements for stability, maintenance, and reproduction also increase. A critical component of system maintenance is the production, dissemination, and integration of information. This is particularly significant in the information society, where access to information constitutes the basis of order. But a problem immediately arises: Who controls guarantees and implements information as the basis of order? The main argument advanced by the authors is that information always and necessarily produces counter-information or disinformation. This contradicting process occurs at all levels of the production, dissemination, and integration of information.

Information is both an important collective asset and a source of private profit. It must be shared as well as guarded. Although the generation of information and counter-information occurs in all social configurations, these are particularly crucial under advanced capitalism, not

only because of the excessive needs for information but also because of its commodification. A balance between the need to share information but also to limit its distribution cannot be accomplished given the conditions of late capitalism. Side by side with the flowering of novel and subversive information is the growing attempt to censure such expressions (e.g., SOPA, PIPA, ACTA[1]). As an example, while the Freedom of Information Bill languishes in the House of Representatives (Congress) of the Philippines, that body quickly enacted a law against cybercrimes. Governments seem to be more concerned about controlling the free flow of information than in guaranteeing its access. While the new media are often perceived as a threat by government officials, ordinary citizens generally see them as emancipatory.

A hundred and fifty years after the Industrial Revolution commenced, humankind is on the threshold of another even more transformative period. The speed, extent, and reproducibility of information challenge notions of "original" and "past." Neither seems relevant for the present. If modernity involved a transformation of the notion of time that allowed people to think globally following the introduction of time zone standardization, then new media may require a different notion of temporality as well. Constant connectivity negates spatiotemporal borders. Neither time nor space constrains life in the virtual present. Modern life is one of constant transit from an actual present to a virtual future.

Just as someone can contact anyone, anytime, anywhere, that someone also can be monitored anytime, anywhere by any one of many state and commercial organizations. As scholars have argued (e.g., Andrejevic, 2007; Leistert, 2012; Lyon, 2001), the state has enormous capacities to monitor its citizens' online activities, practices supported also by commercial concerns. Thus, technologies are not just a means of communication, but also shape who we users are. The world not only is "mediafied," but life transpires in and through these media of communication. As Daniel Miller (1997) argued, material accumulation is not just instrumental but also symbolic. The quest for individual identity requires a growing collection of material and virtual goods. When self-authorship is combined with a consumerist culture, one has entered capitalism's utopia.

While technologies extend human capacity for agency, the acting subject during the practice is increasingly fragmented. People regularly interact with many absent others, many of whom are strangers: They join local, national, and global causes, and they participate in specialized interests such as Japanese wrestling, Caribbean cooking, or Spanish flamenco. Many of these online interactions are conducted individually. Moreover, the speed of technological change often does not allow sufficient time for collective norms to determine acceptable practices. Hence, children and the inexperienced are exposed to certain risks. Under these conditions, the notion of a singular, cohesive, consistent, or bounded self is impossible to maintain.

This expression of agency draws heavily on the expectations of others with whom each of us is increasingly and perpetually connected. It is becoming more difficult not to exercise agency, should that be one's choice. Constant appeals from the market, the state, and even close friends to exercise agency is exhausting and makes solitude impossible. In a speech in 2010, Facebook's Mark Zuckerberg said that people no longer expect privacy in their online activities (Paul, 2010). Thus, modern humans live within a paradox: The more choices people have in authoring their lives, the more dependent they become on the choices of others. The loss of solitude and privacy may be a high price to pay for this expanded agency. Perhaps it is time to reconsider the exercise of agency under conditions that are beyond a person's control. The conditions above shape the production, dissemination, and use of information. As the authors,

Marshall et al., constantly reminded the reader, information is not just pure data but data contaminated with power, interest, and profit. These factors ensure that informationalism produces its own aporias.

In the 12 chapters of this book, the authors provide extensive references and examples of why informationalism produces both order and disorder. They begin by critiquing social theories ranging from Hobbes and Proudhon to Durkheim and Weber that mostly stress order over disorder. Even conflict is seen as a precursor of order, as the authors point to the creative arguments of anthropologist Gregory Bateson using examples from New Guinea. The rationalization of social life so necessary for modernity is intended to eliminate, or at least to minimize, disorder. Economists seem to be the most persuasive exponents of order in society, but their poor record of predicting market fluctuations make their claims suspect.

In several chapters dealing with seemingly more technical aspects of informationalism, such as software design, network compatibility, and computer functions, the authors provide convincing arguments and examples that technologies are themselves social projects open to elements of disruption due to the various hierarchies of power and control exercised by managers and technicians.

The crux of the problem with informationalism is its governing function within advanced capitalism. Data and knowledge, so crucial to capitalist growth and reproduction, is constrained and often hampered by the narrow requirements of immediate and exclusive profit. An irony of the Information Age is that while most of its highly educated workers play essential roles in advancing the system, intellectual work is often devalued.

Even in cases where information sharing and retrieval can be expected to benefit all users, such as peer-to-peer networks and academic researchers, disinformation arises due both to internal and external sources. For instance, competition and the pressures to publish often require academics to favor more exclusive practices, but at the expense of maximizing exchanges and collaboration. Taken to the extreme, these practices can lead to plagiarized sources and even data fabrication in favor of certain theoretical positions.

The book concludes with extensive examples of organizations using the Internet to pursue issues connected with global justice. The full potential of new media to challenge mainstream informationalism has been achieved successfully by a range of nongovernmental organizations, such as the People's Global Action,[2] resulting from the opposition to the neo-liberal policies of the United States of America. More recent expressions of similar movements are Occupy[3] and the political opposition in the Middle East during the Arab Spring.[4] But even these successful examples had to cope with internal dissentions and disinformation. They demonstrate that attempts to employ informationalism for radical transformations have their own limits.

Despite the book's extensive bibliography, the authors overlooked references that support their argument. Critics of the information society have been around for some time. Turkle (2012) and Marche (2012) have presented popular critiques of informationalism. Bauman (2010) argued how identities are now fabricated rather than inherited. Leistert (2012) wrote a powerful critique of the new communications technologies. Based on globally extensive research and drawing heavily on Foucault, Leistert claimed that mobile media is a medium of and for pastoral control that engages users in chatting and jabbering. Mobile media thus become part of "rendering instrumental rationalities and is a technology that enabled authorities to imagine and act upon the conduct of persons individually and collectively, and in locales that were often distant" (Miller & Rose, 2008, p. 16). Its pervasive presence has taken a pastoral mode.

Leistert (2012) referred to David Lyon's work, the *Surveillance Society* (2001). For Lyon, "All societies that are dependent on communication and information technologies for administrative and control processes are surveillance societies" (Lyon, 2001, p. 1). Surveillance, the underside of information society, "is any collection and processing of personal data, whether identifiable or not, for the purposes of influencing or managing those whose data have been garnered" (Lyon, 2001, p. 2). Thus, surveillance is part of a managerial program: It not only collects data, but also, in a managerial way, uses these data in programs and action plans on the surveilled.

"Surveillance capacities are used to sort and shift populations, to categorize and to classify, to enhance the life chances of some and to retard those of others" (Lyons, 2001, p. 4). As a result, surveillance is a discriminating political technology that consists of both care and control, and "is now routinely practiced by a range of agencies including, but as well going well beyond, the state" (p. 30). Facebook, Google, and Tweeter are the most familiar and relatively benign examples of surveillance. Technology generates a lifestyle that refashions the original in hitherto unexpected ways. Technology and society exist in a dialogical relationship.

Foucault (2004/2007, p. 21) argued that apparatuses of security are productive; they "work, fabricate, organize, and plan a milieu ... in which circulation is carried out." The new media technology with its devices, infrastructure, and economy are all results of such a milieu, where the circulation of communication takes place. Such communicative exchanges occur within a climate of free expression even as their accumulation is a basis for surveillance.

Pariser (2011) pointed out that future behavior will be shaped by algorithms collected from past behavior. The Internet becomes an algorithmic program based on past clickstreams. Algorithmically shaped social norms lead to a form of information determinism. The limitless collection of data and its storage lay the bases for a new and more extensive regime of control. Data retention does not block communication flows nor disturb productivity and circulation. Instead, it takes advantage of the flow of signs initiated by liberal rule. While data retention operates population-wide, it invokes a different relation towards its members who are considered a risk.

Andrejevic (2007, p. 177) argued that this limitless accumulation of data led to the formation of a Total Information Awareness Office.[5] This data-gathering process is often a fishing expedition, designed to generate suspects by sifting through the data and identifying potentially high-risk individuals. The data gathered acts as a baseline of behavior where any deviation from the norm triggers suspicion and further investigation. Data retention is a materialization of an excess that is nurtured by (among other technologies) mobile media as it invokes a general mass surveillance.

If fingerprinting solved the problem of individual identity in a growing and shifting population of the 1880s, new technologies amplify this identifying capacity in greater detail. Digital fingerprints reveal all previously recorded interactions and organizations assess the viability of these actions and interactions using algorithmic criteria. This machinable assessment of behavior replaces real-world actions with their algorithmic equivalents, generating new forms of knowledge with little direct relationship to their ontological source. Citizens must assess the emancipative, liberal possibilities of digital media against a growing interest in state and/or corporate surveillance of their actions. A major feature of modernity is a self-reflectivity fulfilled in the new technology. Yet this reflectivity also represents an essential structural component of modern governmentality.

Disorder and the Disinformation Society: The Social Dynamics of Information Networks and Software provides an important contribution to the literature challenging the often-hegemonic claims of the information society. Its basic thesis is relatively simple and convincing: Any attempts at establishing order generate their own aporias and result in forms of disorder. Most of the literature on the information society praises its advantages and seldom mentions the disruptions that are intrinsic to the new order. The gains of the growth of information cannot be denied and constitute an essential element of contemporary life. However, social and individual experiences of disorder at all levels of society must be seen as the counterpart of an imposition of information on social life. The rationalization of social life so beloved by Weber and Durkheim, as they witnessed the transformations from an emergent to a mature capitalist global order, has to be reassessed as its elements increasingly intrude into aspects of the inner-life world, that is, one's interior and self-reflective attitude toward life. Informationalism is an attempt to redefine culture in its own terms, thereby subverting the very basis of social life not dependent on purely monetary gains. Marcel Mauss' (1969) notion of the gift as an essential counterpoint to instrumental exchange is particularly apt in appreciating the significance of notions such as a public commons and open data in the age of informationalism.

Although this book was published 4 years ago, it is still topical—perhaps even more now than before. This book is an important antidote to the often-soporific claims of the information society and worthy of a serious read.

ENDNOTES

1. The Stop Online Piracy Act (SOPA) and its Senate counterpart the PROTECT IP Act (PIPA) were a series of bills promoted by Hollywood in the US Congress that would have a created a blacklist of censored websites. These bills were defeated by an enormous online campaign started by Electronic Frontier Foundation and a handful of other organizations, which culminated in the Internet Blackout on the January 18, 2012. Meanwhile, The Anti-Counterfeiting Trade Agreement (ACTA) was a proposed multinational treaty for establishing international standards for intellectual property rights enforcement. The agreement aims to establish an international legal framework for targeting counterfeit goods, generic medicines, and copyright infringement on the Internet, and would create a new governing body outside existing forums such as the World Trade Organization, the World Intellectual Property Organization, and the United Nations.
2. The People's Global Action on Migration, Development, and Human Rights has been active since 2006 in engaging dialogue on issues of importance to human rights since 2006. More information is available at peoplesglobalaction.org
3. The Occupy movement is an international organization advancing social and economic equality and the promotion of true democratic values around the world. More information is available at https://en.wikipedia.org/wiki/Occupy_movement
4. The Arab Spring movement occurred in numerous countries in the Arab world in 2011, represented by protests and civil unrest that, in many cases, brought about changes in governance (Blakemore, 2019)
5. A program established within the U.S. Defense Advanced Research Projects Agency following the September 11th attacks, the Information Awareness Office was intended to mine vast amounts of data on individuals with the goal of identifying potential terrorists from their technology-based and online activities (Staples, 2005).

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