From Everyday Information Behaviours to Clickable Solidarity in a Place Called Social Media

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The vision of a citizen-designed, citizen-controlled worldwide communications network is a version of technological utopianism that could be called the vision of "the electronic agora."
In the original democracy, Athens, the agora was the marketplace, and more
– it was where citizens met to talk, gossip, argue,
size each other up, find the weak spots in political ideas by debating about them.
Howard Rheingold, *The Virtual Community*, 1993, para.59.

Abstract

The article is a research essay based on a thematic interdisciplinary literature-review that examines social media using the lens of selected theories and concepts in information science and allied disciplines such as communication and media ecology. The specific focus of the article is how social media has altered our notion of cyberspace from being an abstract information space to being perceived as an actual place, for social media more than any other digital media before it, embodies cyberspace and reifies it as a real place, both in our everyday lives and in our public spheres. Anything can happen in this dynamic and heterogeneous place, just as it can in a real place, including protests and revolutions.

Introduction

Although there is no agreed-upon definition of information society, scholars generally agree that we live in one (Webster 2002). The concept of society in itself is a modern notion that goes beyond the nineteenth-century notions of collectivist traditional community predicated on place and vicinity (Agnew 2011, p.316). It is not rooted in any one place, and hence one can be part of a society irrespective of geographical boundaries. In fact, we can be 'apart together' (Huizinga 1950, p. 12) in an information society. With the rise of social media combined with the ubiquity of mobile Internet devices, many of us are even 'alone together' (Turkle 2011, p.1); that is, we may be present together in a physical space, but still be alone and 'telepresent' elsewhere, living in a 'pocket technospace' (Richardson 2007, p.205), interacting with others who may not be with us, using haptic communications. Many have proposed also that we are already moving from an information society to a network culture, 'characterized by an unprecedented abundance of informational output and by an acceleration of informational dynamics [between people]' (Terranova 2004, p. 1). This evolution from community to society to network culture is notable but in many ways it is a natural

progression in that connectivity is no good without people to connect. Thus, while moving the focus away from the individual to community to society to connectivity, social media has also moved us further from mere connectivity into hyper-connectivity and a network culture, where the network, rather than the network's actors, becomes the focus of the culture.

In this network culture, social media has become more than just another network in cyberspace, being a shared and lived-in global space that spans most of the world and is influencing many aspects of our lives. We do our personal socialising on *Facebook*, we build and share our professional networks on *Twitter*, we publicise our CVs on *LinkedIn*, we seek answers on social question and answer sites such as *Yahoo Answers*, we read socially on *Goodreads*, we eat socially on *Yelp*, we continually disseminate our views to the world on blogs, and we watch the news on *YouTube*; there is some form of social media network to fulfil every aspect of our everyday lives. In many ways, social media technologies have already supplanted the home letterbox, the office mailbox, and television in many people's lives. This is possible because it is an affordance to co-experience that helps us simultaneously experience and share our world with others by transcending not just spatial distances, but also temporal distances. In doing so, social media platforms have become tangible and real places where we gather in intended and unintended ways and this has the potential to nurture democracy and civil society, sometimes in dynamic and unexpected ways.

This article explores the place of social media in contemporary civil society by examining social media as a place in and of itself where people search for, seek, find, use and share information for their personal, private, and public spheres. It does so using approaches from Information Science, an interdisciplinary field 'that investigates the properties and behaviour of information, the forces governing the flow of information, and the means of processing information for optimum accessibility and usability' (Borko 1968, p.3). This includes the study of human information behaviours or the totality of human behaviours (both cognitive and affective) with respect to information, and draws upon insights from varied fields such as cognitive psychology, sociology, human learning, organisational behaviour, communications studies, philology, anthropology, evolutionary biology and philosophy.

Social media as an information space

Social media is fuelled by information, just as the Internet and other digital media before it, but the information on social media is different from other media in that we are not just consumers of the information on it, but are also active producers of information within it. The term *prosumers* developed in the context of a market economy by Alvin Toffler (1980) has been applied to our so-called information economy where we are simultaneously producers and consumers of information (Tapscott 1997) and to social media where we are now *produsers* or both producers and users of content (Bruns 2009). Irrespective of the purpose of production and use of information, social media is fundamentally an information space that is transformed into a place through human interactions that create co-experience or an experience in a social context that is shared, interpreted and given meaning with others (Forlizzi and Battarbee 2004); this co-experience can be perceived through different lenses – sociologists might see it as a social space, communication researchers as a communication space, artists as a creative space and so on. This article will focus mainly on social media as an information space and use spatial metaphors and theories to make sense of how we use this space, and how we transform it into a place.

In many ways, social media is the contemporary incarnation of the Internet, which is a complex information-and-communication environment, very much analogous to physical environments, but consisting of symbolic rather than physical matter (Postman 1979). All social networks (be they physical or online) are also information environments and people engage in information behaviours within this environment. Information behaviour is the 'totality of human behaviours with reference to information including unintentional or passive behaviours such as glimpsing or encountering information' (Wilson 2000, p.49) as well as 'purposive behaviours that do not involve seeking, such as actively avoiding information' (Case 2012, p.5). Increasingly this information is coming to us through social media channels. It is estimated that one-third of all new content on the World Wide Web is created on social media sites (most of it born-digital information) and accounts for 20% of all time spent online across the world, with social media reaching 82% of the world's online population in 2011 (Comscore 2011).

The term social media represents a plurality of concepts and platforms rather than one singular notion, but the essential underlying architecture of all social media is the same – one that enables multipoint to multipoint (group) interactions, with very little structure or

hierarchy; that is, it allows not just for one to many, or many to one, but also many to many and peer to peer interaction along with choice, where Person A can follow Person B without Person B making the same decision to follow Person A. There is no physical space in cyberspace; instead, it is a de-centred network of computers that span spatial and temporal boundaries, with no imposed order or hierarchy, allowing immediate connections between any of its points in the same way that Deleuze and Guattari (1987, p. 7) described rhizomatous connections. This means also that individuals have increasingly differentiated ways to interact with people and with information in their everyday lives. This sets apart social media sites from previous iterations of digital communities in that they not only allow individuals to meet strangers, but also that they allow users to create, manage, control, and make visible their social networks to those they choose, hence forming a transparent community space with its implicit rules and codes of conduct which is fundamentally an information space (Boyd & Ellison 2007; Haythornwaite 2005).

Social media as a place for information

The rise of social media is adding more dimensions to our notions of place where we voluntarily or involuntarily become part of a public space termed *networked publics* or 'an imagined collective that emerges as a result of the intersection of people, technology, and practice' (Boyd 2010, p.39). People come together in this network from across geographical divides and spatial and temporal divisions in the spirit of Habermas' positive and vibrant public sphere where none who are able and wish to join are excluded (Habermas 1989, p27). This helps make social media a public place (Juris 2012) while also making social media a place in and of itself – 'a place to go to, a place to be in, a place to gather, and a place to be seen in' (Narayan, Talip, Watson, Edwards 2013, p.1). This influences how people seek, share, communicate, collaborate and disseminate information. In short, they influence our information behaviours, not just within this information space but also in our everyday lives.

So how does cyberspace become a place? In fact, how does any space become a place? The notion of space 'provides the context for places but derives its meaning from particular places' (Relph 1976, p.8). A *space* becomes a particular *place* through the lived human experience that focuses on the mediating role of place in both social relations and the acquisition of meaning (Sack 1997; Agnew 2011) or in the words of geographer Fi-Yu Tuan 'Place is security, space is freedom: we are attached to the one and long for the other' (Tuan 1977, p.3).

Indeed, 'a place require[s] human agency, is something that may take time to know' (Sack 1997, p.16). While space refers to the specific coordinates or structural qualities of a physical environment, our sense of place is a concept that includes the lived experience, interaction and use of that space by its inhabitants, be they permanent or temporary. In effect, a space becomes a place when we attribute meaning and value to a space, or in other words, the notion of place is socially constructed and consists of 'repositories and contexts within which interpersonal, community, and cultural relationships occur, and it is to those social relationships [affective, conative and cognitive], not just the place qua place, to which people are attached' (Low & Altman 1992, p. 7). These concepts around space/place are important in understanding how we inhabit social media in our everyday lives and also how we use it to engage with information, with society, with the civil sphere, and with the world at large.

Social media and the challenge of cosmopolitan civil societies
Sociologist Jeffrey Alexander urged that we conceive of civil society as a civil sphere, analogous to Habermas' concept of public sphere (Habermas 1989) but one that 'relies on solidarity, on feelings for others whom we do not know but whom we respect out of principle, not experience' (Alexander 2006, p.4); it relies on a wider solidarity alongside personal autonomy. Such solidarity requires spaces and practices that enable it and nurture it, and social media platforms provide this space while promoting the patterns of interaction that shape our information practices and is easily integrated into one's social fabric, making it an ideal candidate for a public sphere.

Peter Dahlgren refines this idea of civil sphere down to a civic culture 'comprising a number of dynamically interrelated parameters such as values, affinity, knowledge, identities and practices (Dahlgren 2005, p.158). This civic culture is evident in most social media sites which group themselves around some common everyday values in which users share other affinities such as common interests with faraway strangers within a familiar space, and where they engage in knowledge sharing, and 'where the most fundamental and most ubiquitous practice is precisely civic interaction, and discussion' (Dahlgren 2005, p. 159). Moreover 'no organisation "represents" civil society, civil society is a *space* of participation, not representation' (Kohler-Koch & Quittkat 2009, p.19). Social media provides this space of participation and hence has a legitimate place in our contemporary civil society and our conceptions of cosmopolitanism.

Although there is no single conceptualisation of cosmopolitanism, the core idea relates to a sense of mutual respect and tolerance within an environment with a diversity of cultures, of being a citizen of the world and spanning boundaries without conflict; a 'universality plus difference' [that is neither a naive universalism nor a universal cultural relativism] – 'a name for something that is a challenge rather than a solution' (Appiah, 2007 p.xv). Ulrich Beck (2009) proposes that cosmopolitanism is something that underpins the notion of hybridity, as something that 'rejects the either/or alternative between territorially-bounded national and ethnic identities without denying the historical narrative behind them' (Beck 2009, p.22).

Previous iterations of the Internet were expected to lead to cosmopolitanism – a *digital cosmopolitanism*. Nevertheless, some studies (Zuckerman 2010) show that every country gets all but 5% of its information from domestic sources and not from diverse information sources as we would imagine, and in instances where clusters of activity do cross national borders, they flow from pre-existing ethnic identities, as between expatriates and the home country, and hence according to Zuckerman (2010) our perception of a digital cosmopolitanism enabled by the Internet is simply an imaginary cosmopolitanism. This has also been called cyber-balkanisation (Sunstein 2004, p.57) – 'given the vast number of possible clusters one can associate with, it becomes easy to find a comfortable niche with people just like oneself, among other individuals whose views merely reinforce one's own…giving us the illusion that we are connecting with others' (2010 para 36). This confirms and connects to Information Behaviour theories such as selective information seeking and concepts such as one's information source horizons.

Individuals generally tend to expose themselves to information that is already in accordance with their interests, needs, or existing attitudes, and avoid information that contradicts them, thus employing *selective exposure*, and consciously or unconsciously avoid or reject information that does not agree with their world-view or previous experience (Jonas et. al 2001; Rogers 1983; Kuhlthau 1991). From a social and cultural aspect, this points to meaning as fundamentally a shared concept, or all meaning as shared meaning (Dervin 1992) involving a sense-making process within a personal frame of reference (Kuhlthau 1991). Hence, people often stay within their own comfort zones in regard to information seeking and information sharing, rather than venture into zones that involve a lot of sense-making. In a study of young social activists' use of digital technologies in Rwanda, Yerbury (2013) found that they did not use the internet to create new connections outside the network of people they

already knew, and posits that such behaviours could be a hindrance to any attempts at globalised action for social change (Yerbury 2013).

One's interests drive one's everyday information practices, and these interests structure the subject areas of daily life into an order of importance or regions of relevance; these preferences, in turn, are reflected in the construction of one's *information source horizons* (Savolainen 2007, p. 1712). Accomplishments in information technology are often celebrated as tools to advance cosmopolitanism and the 'global village' (McLuhan 1964, p 63), or more precisely, that 'one's "village" could span the globe' (Wellman and Gulia 1999, p.333) by removing the need for physical co-presence via telegraphy, radio, telephony, television, Internet etc. Nevertheless, some argue that they have had no such effect (Zuckerman 2012; Agnew 2011), for 'what [the technologies] did do was [simply] help reconstitute and reorganize spatial relations such that places [in the digital world] were remade and reconfigured' along existing worldviews and affinities (Agnew 2011, p.316). Despite the diversity, richness, and accessibility of information in digital media, not all of us can access the different 'registers of knowledge' in the digital world because the 'the keys of knowledge all don't always open the same doors' (Shayegan 1996 translated by Silverstone 1999, p.24).

These are valid reservations that apply to social spaces as much as they do to digital and social media, but they need to be viewed in the context of social media being predicated on global communication technologies that are not yet accessible to a majority of the world. Nevertheless, the spread and reach of these technologies is widening every day and in 2014, the ranking of regions by social network users is expected to reflect regional shares of the global population and also reach more of the younger demographic through mobile social media (Pew Internet Research Center 2012; eMarketer 2013). Hence, digital cosmopolitanism or virtual cosmopolitanism in regard to social media bears studying as it is still an emerging new information environment with great potential to aid cosmopolitanism, for it gives voice to citizens who are often ignored, and can shine light on places often bypassed by mainstream media. It is also an economically and socially viable manner of building social and cultural capital where communication tends to be playful, positive and informal (Soukup 2006) and an emerging space for social questioning and answering (Social Q&A) where people are increasingly seeking and providing information about everyday life, medical, as well as extraordinary situations (Morris, Teevan & Panovich 2010). Cosmopolitanism is also

a name for the ever-shifting, ever-vibrant space in which persons fuse reflective openness to the new with reflective loyalty to the known. Cast in other terms it is a name for a dynamic way of leaving and remaining at home (Hansen et al. 2009 p. 592)

This connects well to the discussion of space/place in the previous section and how social media creates and provides affordance to this vibrant space and provides us with a dynamic way of leaving while remaining at home, and of being home while away, of being a citizen of the world *à la* Diogenes; a place for a *rooted cosmopolitanism* rather than an elitist and eclectic perception of cosmopolitanism that is not accessible to all (Olson 2011, p.5).

Social media in everyday life
One of the most notable aspects of this *cyberspace* (Gibson 1984) is the problematisation of the boundaries that offered structure to everyday life and the disappearance of the lines between private and work spheres (Schement & Curtis 1995); this is more so within digital social media for it straddles traditional notions of personal, professional, and public space, and even makes it hard to pry apart personal and public time. Although professionals, organisations, and academics alike increasingly use social media for informal information sharing, communication, and disseminating information (Chamberlin & Lehmann, 2011; Kassens-Noor 2012), issues related to credibility and authenticity mean social media is still seen as an informal communication media rather than a formal one (Black 2008; Hadjerrouit 2011). Nevertheless, in everyday life and work 'many people use formal sources rarely, relying instead on informal sources such as friends and family, or knowledgeable colleagues at work' (Case 2012, p.375). In fact, 'barring special circumstances, people turn to other people when seeking everyday information' (Fisher et. al, 2005, para 2). This type of information seeking and sharing between people without the involvement of a perceived cognitive authority is increasingly evident in social media spaces within interactions between people and with organisations both formally and informally (Talip, Narayan, Watson, Edwards 2013) as people first ask questions of their networks within social media before seeking information outside of it; the only authority here is the authority of experience that the people in the network share with each other.

One defining aspect of social media technologies is how it has altered and made fluid our sense of time and space, more so than previous technologies. Giddens' notion of *time-space distanciation* or the separation of time [*when*] from space [*where*] (Giddens 1981, p. 4) and

Harvey's notion of *time-space compression* (Harvey 1990, p. 226) in postmodern life are still relevant, but this loss of fixity is further amplified in social media. While the rise of digital media prompted scholars to remark on the loss of public places (Gumpert 1987), social media in combination with mobile technologies has prompted a warning also about creating 'disembodied private places' (Gumpert & Drucker 2009, p. 1) within physical public places where a person can *be there* and yet *not there.* It also allows people to choose how they employ their digital private space, analogous to how Edward Hall, in his theory of proxemics (Hall 1966, p.60) describes our different approaches to people in our physical communication environments to maintain separation and distance as needed – intimate, personal, social or public distance. In this way, social media allows us also create a form of *embodied interaction* (Dourish 2001, p.17), an interaction that occurs in real time but in virtual space instead of real space, yet is intertwined with our physical worlds, thus creating a place. In fact, while some see cyberspace as an individual conceptual space, most see it as a product of civil and social interaction (Strate, Jacobson, & Gibson 1996) where our collective actions are turned into meaning through our interactions. Although it sounds tautological, this is certainly true of social media spaces that would not exist without the people that make it a place.

The fluidity, non-fixity, and ambiguity of space and time unbounded by physical or temporal borders afforded by digital media have prompted some scholars to see cyberspace as a *utopia* where a new society can evolve (Barlow 1996; Shirky 2008), while others simply see it as an unexceptional *isotopia* that simply mirrors the real-world (Lefebvre 1996; Cohen, 2007). Social media, on the other hand, has the potential to be a *heterotopia*, a term Michel Foucault used to describe distinct human societies 'that have the curious property of being in relation with all other sites… of juxtaposing in a single real place several spaces, several sites that are in themselves incompatible' (Foucault 1986, p.25-26). Although Foucault applied this to alternate spaces such as brothels, cemeteries, colonies, and even museums and theatres, 'it refers in one sense to a place that is socially different from the (implicitly normal) spaces surrounding it. However, the difference presented by heterotopia is not essential to that place. Instead, heterotopia is foremost an ambiguous, variable, and dynamic site that incites (re-) consideration and (re-)negotiation of socio-spatial norms' (Kraftl 2010, p.355). Many (but not all) social media spaces can be considered heterotopias as they are alternate spaces in our societal web that is a reflective space rather than simply a reflection of the real world. 'Heterotopia are spaces in which an alternative social ordering is performed' (Hetherington 1997, p.52) as opposed to a modernist society based upon ordering individual persons

(Agnew 2011, p.316) or a traditional collectivist community based on ordering by place and vicinity. Mainstream social media sites such as *LinkedIn* reproduce and extend real-life professional networking whereas *facebook.com* and *twitter.com* can be considered isotopias that simply mirror and replicate the real world in the main (or even our imagined utopias in some cases). Other alternative social media such as *4chan.com*, *reddit.com*, *chatroulette.com*, *ask.fm*, and *formspring.me* can be considered social media sites that are on the cyber-frontier, for they can be

> places of freedom (where rules are limited) or danger (where rules do not protect) – and sometimes both…Social media websites can also be *other* places, set aside from routine kinds of interactions… heterotopic social media websites take the user out of the routines of regular life…and are characterised by their liminality where users are both within the site and in the physical world…where the separation between them is not clear (Marlin-Bennet & Thornton 2012, p.596).

Social gaming websites such as *World of Warcraft* can also be considered heterotopias as they are 'capable of juxtaposing in a single real place several spaces, several sites that are in themselves incompatible' (Foucault 1986, p.25).

Another concept that relates to social media is The Third Place concept, which explains one of the ways in which a space becomes a place. Third Places are hangouts at the heart of a community, or the 'great good places in society, a public place that hosts the regular, voluntary, informal, and happily anticipated gatherings of individuals beyond the realms of home and work' (Oldenburg 1997, p.16). They are important for civil society, democracy, civic engagement, and establishing feelings of a sense of place. Oldenburg proposed that any place can be a Third Place, but he firmly rooted it in the notions of a physical space. Other scholars have argued that computer-mediated information environments, including social media, are highly suitable for being considered a Third Place in our contemporary world as they have indeed evolved into hangouts at the heart of certain communities (Soukup 2006; Crick 2011; Sternberg 2012). In fact, on social media, 'people's sense of social place may be restored ...or they may begin to develop a sense of social place if they were previously unacquainted with such feelings' (Sternberg 2012, p.174). This idea that Third Places can actually help develop a sense of social place is remarkable and definitely adds to the claim of social media as a Third Place and a great good place in our contemporary information society, which can also be viewed as an information commons shared by everyone in civil society.

The concept of information commons was proposed in the 1990s by libraries, civic organisations and scholars as key to 21st century democracy. It evolved from historical ideas about shared spaces such as the public commons in England. Information commons extends this concept to virtual spaces where information and ideas can be freely exchanged. It envisions the creation and maintenance of a wide variety of openly accessible democratic information resources that are free from access restrictions and 'information enclosure' (Kranich 2004, p.6) in order to create a community for 'democratic participation, openness, social equity, and diversity' (Bollier & Watts 2002, p.3). Social media applications are highly conducive to this notion of information commons. This is partly because social media facilitates 'phatic communication' (Miller 2008, p.395) or 'small talk' whose main purpose is a social one and not necessarily one of communicating any information. Despite many scholars' reservations about the usefulness of such phatic communications in the public sphere (Karpf 2010), others argue that such phatic communication helps people develop online communities through seemingly personal but inconsequential small conversation; they build engagement, solidarity, and ceremony (habits) that create inter-personal trust through familiarity and interaction that is a crucial element of civil society (Makice 2009; Gibson 2002). Indeed, digital and social media communities that begin as informal spaces do evolve their own norms and rules of behaviour, and often engage in the public use of reason for collaborative planning and deliberative democracy (Schlosberg, Shulman, and Zavestoski 2007); this is related to the communicative rationality of Habermas' (1989) public sphere. However, there are still issues that influence the use of social media as information commons. The key issues are trust, authorship, authority, reliability, credibility, and convergence of information, along with cost of participation in terms of time and effort (Velonaki, et al. 2008; Gannon-Leary et. al. 2011; Westerman et al. 2012).

In societies that lack civil and democratic values, strong ties to family and the clan tend to be a prevalent form of ties but they inhibit interactions with those outside the network (Gibson 2002). Hence the creation of weak ties in the form of social networks is important in order to spread new ideas, and to foster civil and democratic values. The theory of Strength of Weak Ties states that within an information network, 'those to whom we are weakly tied are more likely to move in circles different from our own and will thus have access to information different from that which we receive' (Granovetter 1973, p.1375). In social media, these weak ties are a 'rich source of new information that we tap when we are trying to improve our lot… We might trust socially distant people less, but the information and contacts they

have may be intrinsically more valuable because we cannot access them ourselves' (Christakis & Fowler 2011, p. 158).

The theory of strong and weak ties was extended through the theory of information grounds, which are 'social settings where information, people, and place come together and [unintentionally] create information flow within a physical environment' (Pettigrew 1998, p.811) such as in doctor's waiting rooms and hair salons (Fisher, Landry, & Naumer 2007). Unlike the Third Place, it is not a designated place and there need not be regulars. Social media platforms share many of the characteristics of being *online information grounds* except that information, people, and online platform (space) come together to create information flow in a much less restrictive way than in physical information grounds, as they are unbounded by temporal and spatial restrictions, enabling effective information sharing geographically across any number of physical spaces, both synchronously and asynchronously (Counts & Fisher 2010). The openness, transparency and availability of social media have also helped users share, disseminate, and find information serendipitously in online spaces (Campbell, Ellis, & Adebonojo 2012). This serendipitous information acquisition on social media is not a naïve encountering of information, but just as in physical information grounds where people, place and information come together, it is an ability to drown out the noise and pick up what is meaningful or relevant to us. Preparedness of mind or *intuitive sagacity*, 'a random juxtaposition of ideas in which loose pieces of information frequently undergo a period of incubation in the mind and are brought together by the demands of some external event, such as a reference query, which serves as a catalyst' (Liestman 1992, p. 530), plays a large role in serendipitous information encountering and serendipitous information discovery on social media within our everyday lives.

Social media as a hybrid thirdspace in the civil sphere
Postcolonial theorist Homi K. Bhabha, in his *Location of Culture*, describes a hybrid space, since termed the *thirdspace*, a concept that adds social and historical dimensions to the spatial. It is a space where two cultures share an extraterritorial space of discourse; this space can be in the public sphere where the centre and the margins come together for dialogue but is often also a space on the margins for whispered plotting and planning (Soja, 1996; Bhabha 1994; Spivak 1988). In our contemporary society, social media has become the extraterritorial medium of choice for those within this hybrid thirdspace, organising public action or seeking

solidarity for their political or democratic causes and revolutions. This is evident from recent events that originated with or alongside social media in countries such as Tunisia, Egypt, Iran, and Bahrain that gained worldwide attention. Irrespective of whether these events are seen as successful or unsuccessful attempts at organising public opinion and influencing authorities, it cannot be denied that social media tools are helping build more informed communities which enables them to express and share political and national opinions publicly, increase transparency, and seek to hold governments accountable (Ghannam 2011). Social media can aid in democratising as it encourages and enables collective interactions and provides the resources to organise political changes. This is true both in the sense of facilitating pluralised interaction and discourse in everyday life as well as providing the means for organising for democracy (Ghanavizi 2011; Sreberny and Khiabany 2010).

Blaise Cronin and Holly Crawford (1999) proposed the concept of community/social information warfare, where political and social activists use the Internet and related technologies to advance their objectives. They argue that the Internet provides the 'immediacy of audience access' (Cronin & Crawford 1999, p.261), where social information warfare can thrive. The earliest example of a major social information warfare operation was the Zapatista movement in Mexico from 1994 to 1996, where the Internet was effectively used to force the government into making reforms (Ronfeldt & Arquilla 1998). The Internet was used to mobilise protests at the WTO summit in Seattle in 1999, and later, mobile phones and online social media have been used to orchestrate anti-government protests in the Philippines, Iran, Moldova, and Urumqi in China (Pillay, van Niekerk & Maharaj 2010). The uprisings in Tunisia, Egypt, Iran, and Bahrain in 2011 and onward are the latest in this budding trend of using social media to facilitate mass protest actions. Such citizen-driven social media can achieve three interrelated goals through cyber-activism: erosion of support for the state (both domestically and internationally), mobilisation, and internationalisation (McLaughlin 2003). This was the case in Egypt and in Libya in 2011 where social media sites were crucial to cyber-activism, especially as protesters set up extraterritorial proxy servers in the face of mass censorship by authorities in the respective countries (Dainotti et al. 2011).

There have been decentralised, diffuse, and leaderless networks since at least the 1960s but social media sites have made them more transparent and helped the diffusion of global justice movements by enhancing their scale of operation and allowing activists to more effectively

communicate and coordinate across geographic spaces without the need for vertical hierarchies (Juris 2012). Social media sites are also used for generating grass-roots support by non-government organisations (NGOs), as well civil society, social justice, and equality advocacy organisations that mobilise supporters through communications alone. These new online civil society organisations are 'redefining membership from a financial-supporter relationship to a communication-recipient relationship' (Karpf 2010, p. 5). Examples include MoveOn.org, Avaaz.org, Change.org, GetUp.org, DestroytheJoint.org and several other activist organisations that use petitions and actionable items that are propagated through social media (Caro 2013; Hara & Huang 2011; Marichal 2010; Rutledge 2010; Valenzuela 2013; Vromen 2011).

By involving individuals from diverse geographical, cultural and social locations with the opportunity to publicly participate in dialogue and collective action on social issues, these civil society organisations are changing the nature and landscape of social protest and activism locally (Rutledge, 2010; Hara & Huang, 2011) albeit their global effects are less evident. Social media channels 'allow individuals to quickly, cheaply, and effectively blast out vast amounts of information, links, and updates via person-to-person, ego-centered networks…taking advantage of powerful "small-world" effects to generate massive viral communication flows' (Juris 2012, p.267). This is possible because social media enables individuals to connect with and participate in forceful collective action in a way that is integrated with their everyday activities and behaviours in an online world (Bennett, 2012; Rotman et al. 2011). This could be seen as a shallow solidarity and has been referred to as 'clicktivism' (Karpf 2010, p.8) rather than true activism, but Juris (2012) posits the idea of *networking logics* where such practices build more than 'horizontal connections across diversity and difference by helping other political actors interpret such practices', thus initiating action. On the other hand, *aggregation logics* also 'shapes our interactions with social media and generates particular patterns of social and political interaction that involve the viral flow of information and subsequent aggregations of large numbers of individuals in concrete physical spaces' (Juris 2012). In this way, one's effortless entry into such online solidarity spaces by entering them via clickable gateways on social media can indeed lead to a connection between the virtual space and physical space, and between our online lives and the public square.

In 1996 Barlow prophesied that cyberspace would be 'a civilization of the mind' and challenged the world's governments, 'Your legal concepts . . . do not apply to us'. (Barlow 1996, para. 9). In 2011 Howard et al. declared that power to control information no longer resides exclusively with the institutions of the state and that it resides in media networks, specifically technologically mediated social media (Howard et. al. 2011). Yet, sadly, in 2013, through revelations around global security monitoring (Schmidt & Cohen 2013) we were reminded that 'the ungovernability of cyberspace was neither permanent nor technologically necessary' (Cohen 2007, p.217), and that 'the differences in cyberspace expose the latent ambiguities in even formerly straightforward legal guarantees' (Lessig 2000, p. 22); this works both ways, and as the very infrastructure of cyberspace depends on authorities of power, it is truly a heterotopian thirdspace where the centre and margins can and do come together, especially in times of conflict or unrest. When asked about social media in the context of *thirdspace*, Homi K. Bhabha, in an interview (2013), said:

> I think social media is very important, but we have not developed the kind of public institutions that would allow social media to be more than episodic. We need it to have a sense of the ongoing conversations in a place of public resonance. And I don't think we have those institutions. That's why, whether Twitter or Facebook, we have to build into these very important innovations space for reflective conversations. That is one of the most important bases of democratic growth. We have to create institutions where public reason can be disseminated, constructed in a context so that we can have the full use of digital communication. We need a public sphere of the digital world (Bhabha 2013, p.4)

Social media certainly has the potential of moving from the civil sphere to the public sphere, and has done so in many instances – governments increasingly use social media platforms also for eGovernment and disaster management specifically – but issues of trust and credibility still remain due to questions about privacy and security. There is also a movement initiated by public-service employees across the world to make government more open, transparent, digital, mobile and citizen-centric, and social media use is an integral part of that effort. For example, public sector employees in Australia have been self-organising around Gov 2.0 conferences (via social media about social media) around the country to share and promote innovative ways in which governments can use social media in achieving a more citizen-oriented, open and responsive government and promote democratic conversations and civic discourse. There is also a Gov 2.0 taskforce (gov2.net.au/) set up the Australian government to look at incorporating social media technologies to aid deliberative democracy.

Conclusion

This article examined the various ways in which we can conceive of and perceive social media and how this intersects with pre-existing theories of how we as humans seamlessly translate habits and information practices from our physical spatial environment to cyberspace and to virtual places. And yet, the literature reveals a paucity of empirical research on how social media is influencing our everyday lives. This is a rich area of exploration and theory building that social science researchers can contribute to in a way that helps build civil discourse.

There is one issue this article did not touch upon and that is the increasingly relevant issue of uncivil behaviours and rule-breaking within social media. Just as in the physical places of human society, the social media space is inhabited also by seemingly unwanted elements – from bullies to criminals to profiteers to perverts. As well, issues of user privacy versus state-surveillance dominate current discourse around social media. Howard Rheingold's optimistic vision of a technological utopianism (the epigram for this article) ends with an ominous warning: 'But another kind of vision could apply to the use of the Net in the wrong ways, a shadow vision of a less utopian kind of place - the Panopticon' (Rheingold 1993, para. 60). And thereby hangs a cautionary tale, for social media can liberate, or social media can be a trap, even as we work together to create a more citizen-centred public sphere of the digital world.

References

Agnew, J. 2011, 'Space and Place', in J. Agnew & D. Livingstone (eds), *The SAGE Handbook of Geographical Knowledge*, SAGE Publications Ltd. , London. Online book viewed 22 November 2012 < http://dx.doi.org/10.4135/9781446201091>

Alexander, J.C. 2006, *The Civil Sphere*, Oxford University Press, London and New York.

Appiah, K.A. 2007, *Cosmopolitanism: Ethics in a World of Strangers*, W. W. Norton & Company, New York, NY.

Barlow, J.P. 1996, *A Declaration of the Independence of Cyberspace,* Feb. 8, 1996, Davos, viewed 10 November 2013, <http://homes.eff.org/~barlow/Declaration-Final.html >.

Beck, U. 2009, 'Cosmopolitanism without cosmopolitans: on the distinction between normative and empirical-analytical cosmopolitanism in philosophy and the social sciences', in K. Ikas & G. Wagner (eds), *Communicating in The Third Space*, Routledge, New York, NY.

Bennett, W.L. 2012, 'The personalization of politics: political identity, social media, and changing patterns of participation, ' *The Annals of the American Academy of Political and Social Science*, vol. 644, no. 1, pp. 20-39. http://dx.doi.org/10.1177/0002716212451428

Bhabha, H.K. 1994, *The Location of Culture*, Routledge, London.

Bhabha, H.K. 2013, 'We need a public sphere of the digital world', Interview with The Indian Express, viewed 12 November 2013, <http://www.indianexpress.com/news/we-need-a-public-sphere-of-the-digital-world/1152248/>

Black, E.W. 2008, 'Wikipedia and academic peer review', *Online Information Review*, vol. 32, no. 1, pp. 73-88. http://dx.doi.org/10.1108/14684520810865994

Bollier, D. & Watts, T. 2002, 'Saving the information commons: a public interest agenda in digital media', New America Foundation, <http://www.newamerica.net/files/archive/Pub_File_866_1.pdf>, viewed 25 November 2013.

Borko, H., 1968, 'Information science: What is it?', *American Documentation*, vol. 19, no.1, pp. 3-5. http://dx.doi.org/10.1002/asi.5090190103

Boyd, D. 2010, 'Social network sites as networked publics: affordances, dynamics, and implications', in Z. Papacharissi (ed.), *Networked Self: Identity, Community, and Culture on Social Network Sites*, Routledge, New York, NY, pp. 39-58.

Boyd, D.M. & Ellison, N.B. 2007, 'Social network sites: Definition, history, and scholarship', *Journal of Computer-Mediated Communication*, vol. 13, no. 1, p. article 11, viewed 18 November 2013, < http://jcmc.indiana.edu/vol13/issue1/boyd.ellison.html%3E. http://dx.doi.org/10.1111/j.1083-6101.2007.00393.x

Brown, R., Recker, J., & West, S. 2011, 'Using virtual worlds for collaborative business process modeling', *Business Process Management Journal,* vol. 17, no. 3, pp. 546-564. http://dx.doi.org/10.1108/14637151111136414

Bruns, A. 2009, 'From prosumer to produser: Understanding user-led content creation', paper presented at *Transforming Audiences* 2009, 3-4 Sep, 2009, London.

Campbell, K., Ellis, M. & Adebonojo, L. 2012, 'Developing a writing group for librarians: the benefits of successful collaboration', *Library Management*, vol. 33, no. 1, pp. 14-21. http://dx.doi.org/10.1108/01435121211203284

Caro, J. 2013, *Destroying the Joint: Why Women Have to Change the World*, University of Queensland Press, Brisbane.

Case, D.O. 2012, *Looking for Information: a Survey of Research on Information Seeking, Needs, and Behaviour,* (3rd ed*.*), Emerald, Bingley, UK.

Chamberlin, L. & Lehmann, K. 2011, 'Twitter in higher education', *Cutting-edge Technologies in Higher Education*, vol. 1, pp. 375-91. http://dx.doi.org/10.1108/S2044-9968(2011)0000001021

Christakis, N. & Fowler, J. 2011, *Connected: The Amazing Power of Social Networks and How They Shape Our Lives*, Harper Press, London.

Cohen, J.E. 2007, 'Cyberspace as/and space', *Columbia Law Review*, vol. 107, no. 1, pp. 210-56.

Comscore 2011, *It's a Social World: top ten need-to-knows about social networking and where it's headed*, viewed 12 November 2013, <http://www.comscore.com/Insights/Presentations_and_Whitepapers/2011/it_is_a_social_world_top_10_need-to-knows_about_social_networking%3E.

Counts, S. & Fisher, K.E. 2010, 'Mobile social networking as information ground: a case study', *Library & Information Science Research*, vol. 32, pp. 98-115. http://dx.doi.org/10.1016/j.lisr.2009.10.003

Crick, A.P. 2011, 'New third places: opportunities and challenges', *International Journal of Culture, Tourism and Hospitality Research*, vol. 5, no.1, pp. 63-77. http://dx.doi.org/10.1108/S1871-3173(2011)0000005006

Cronin, B. & Crawford, H. 1999, ' Information warfare: Its application in military and civilian contexts', *The Information Society*, vol. 15, no. 4, pp. 257–63.

Dahlgren, P. 2005, 'The Internet, public spheres, and political communication: dispersion and deliberation', *Political Communication*, vol. 22, pp. 147–62. http://dx.doi.org/10.1080/10584600590933160

Dainotti, A., Squarcella, C., Aben, E., Claffy, K., Chiesa, M., Russo, M. & Pescapé, A. 2011, 'Analysis of country-wide internet outages caused by censorship', *Proceedings of the 2011 ACM SIGCOMM conference on internet measurement conference*, 11/2011, IMC '11, pp. 1 - 18. http://dx.doi.org/10.1145/2068816.2068818

Deleuze, G. & Guattari, F. 1987, *A Thousand Plateaus: Capitalism and Schizophrenia (Trans. by Brian Massumi)*, The University of Minnesota Press, Minneapolis.

Dervin, B. 1992, 'From the mind's eye of the user: the sense-making qualitative-quantitative methodology', in J. Glazier & R. Powell (eds), *Qualitative Research in Information Management,* Libraries Unlimited, Englewood, pp. 61-84.

Dourish, P. 2001, *Where the Action Is*, MIT Press, Cambridge.

eMarketer 2013, 'Social Network Users: 2013 Forecast and Comparative Estimates', viewed 12 November 2013,< http://www.emarketer.com/Article/Social-Networking-Reaches-Nearly-One-Four-Around-World/>

Fisher, K.E., Landry, C.F. & Naumer, C. 2007, 'Social spaces, casual interactions, meaningful exchanges: 'information ground' characteristics based on the college student experience', *Information Research*, vol. 12, no. 2, pp. 1-12, viewed 18 May 2012, <http://informationr.net/ir/12-2/paper291.html%3E.

Fisher, K., Naumer, C., Durrance, J., Stromski, L. & Christiansen, T. 2005, 'Something old, something new: preliminary findings from an exploratory study about people's information habits and information grounds', *Information Research*, vol. 10, no. 2, viewed 20 November 2013 <http://InformationR.net/ir/10-2/paper223.html>

Forlizzi, J. & Battarbee, K. 2004, 'Understanding experience in interactive systems', paper presented to the *Proceedings of the 5th Conference on Designing Interactive Systems: Processes, Practices, Methods, and Techniques*, Cambridge, MA. http://dx.doi.org/10.1145/1013115.1013152

Foucault, M. 1986, 'Of other spaces: Utopias and Heterotopias', *Diacritics 16*, Spring 1986, First published as Des Espaces Autres, *Architecture/Mouvement/Continuit*é, October 1986. English translation by Jay Miskowiec, viewed online 20 November 2013 < http://web.mit.edu/allanmc/www/foucault1.pdf> http://dx.doi.org/10.2307/464648

Gannon-Leary, P., Fontainha, E. & Bent, M. 2011, 'The loneliness of the long distance researcher', *Library Hi Tech*, vol. 29, no. 3, pp. 455-69. http://dx.doi.org/10.1108/07378831111174422

Ghanavizi, N. 2011, 'Political protest and the Persian blogosphere: The Iranian election', in S. Cottle & L. Lester (eds), *Transnational Protests and the Media*, Peter Lang, New York, NY.

Ghannam, J. 2011, 'Social media in the Arab world: leading up to the uprisings of 2011', Center for International Media Assistance, Washington, DC, viewed 12 November 2013, <http://cima.ned.org/publications/social-media-arab-world-leading-uprisings-2011-0%3E.

Gibson, J.L. 2002, 'Social networks, civil society, and the prospects for consolidating Russia's democratic transition', in M.E. Ethridge (ed.), *The Political Research Experience: Readings and Analysis*, Sharp Inc., New York, NY.

Gibson, W. 1984, *Neuromancer* New York: Ace Books.

Giddens, A. 1981, *A contemporary critique of historical materialism: Vol.1. Power, property and the state*, Macmillan, London.

Granovetter, M.S. 1973, 'The strength of weak ties', *American Journal of Sociology*, vol. 78, no. 6, pp. 1360–80. http://dx.doi.org/10.1086/225469

Gumpert, G. 1987, *Talking Tombstones and Other Tales of the Media Age*, Oxford University Press, New York, NY.

Gumpert, G. & Drucker, S. 2004, 'Plato's cave: public space transformed', paper presented to the *Open Space Conference*, Edinburgh, viewed 12 November 2013, <http://www.openspace.eca.ac.uk/conference/proceedings/PDF/Gumpert.pdf%3E.

Habermas, J., 1989, *The Structural Transformation of the Public Sphere: An Inquiry into a category of Bourgeois Society, Polity*, Cambridge, MA, MIT Press.

Hadjerrouit, S. 2011, 'A collaborative writing approach to wikis: design, implementation and evaluation', *Issues in Informing Science and Information Technology*, vol. 8, pp. 431-49.

Hall, E.T. 1966, *The Hidden Dimension*, Anchor Books, New York, NY.

Hansen, D.T., Burdick-Shepherd, S., Cammarano, C. & Obelleiro, G. 2009, 'Education, values, and valuing in cosmopolitan perspective', *Curriculum Inquiry*, vol. 39, pp. 587–612. http://dx.doi.org/10.1111/j.1467-873X.2009.00461.x

Hara, N. & Huang, B.Y. 2011, 'Online social movements', *Annual Review of Information Science and Technology*, vol. 45, no. 1, pp. 489-522. http://dx.doi.org/10.1002/aris.2011.1440450117

Harrison, S. & Dourish, P. 1996, 'Re-place-ing space: the roles of place and space in collaborative systems', *Proceedings of CSCW'96*, ACM, Boston, Mass., pp. 67-76.

Harvey, D. 1990, *The condition of postmodernity*, Basil Blackwell, Oxford.

Haythornwaite, C. 2005, 'Social networks and Internet connectivity effects', *Information, Communication, & Society*, vol. 8 no. 2, pp. 125-147. http://dx.doi.org/10.1080/13691180500146185

Hetherington, K. 1997, *The Badlands of Modernity: Heterotopia and Social Ordering*, Routledge, New York, NY.

Howard, P.N., Duffy, A., Freelon, D., Hussain, M., Mari, W. & Mazaid, M. 2011, *Opening closed regimes: what was the role of social media during the Arab Spring?* Project on information technology and political Islam, viewed 12 November 2013, <http://pitpi.org/index.php/2011/09/11/opening-closed-regimes-what-was-the-role-of-social-media-during-the-arab-spring%3E.

Huizinga, J. 1950, *Homo Ludens: a study of the play element in culture*, Beacon Press, Boston, Mass.

Jonas, E., Schulz-Hardt, S., Frey, D. & Thelen, N. 2001, 'Confirmation bias in sequential information search after preliminary decisions: an expansion of dissonance theoretical research on selective exposure to information', *Journal of Personality and Social Psychology*, vol. 80, no. 4, pp. 557-71. http://dx.doi.org/10.1037//0022-3514.80.4.557

Juris, J.S. 2012, Reflections on #Occupy Everywhere: Social media, public space, and emerging logics of aggregation, *American Ethnologist*, vol. 39, pp. 259–79. http://dx.doi.org/10.1111/j.1548-1425.2012.01362.x

Karpf, D., 2010, Online political mobilization from the advocacy group's perspective: Looking beyond clicktivism, *Policy & Internet*, vol. 2, no. 4, pp. 7-41. http://dx.doi.org/10.2202/1944-2866.1098

Kassens-Noor, E. 2012, 'Twitter as a teaching practice to enhance active and informal learning in higher education: the case of sustainable tweets', *Active Learning in Higher Education*, vol. 13, no. 1, pp. 9-21. http://dx.doi.org/10.1177/1469787411429190

Kohler-Koch, B. & Quittkat, C. 2009, 'What is civil society and who represents civil society in the EU? Results of an online survey among civil society experts', *Policy and Society*, vol. 28, no. 1, pp. 11-22.

Kraftl, P. 2010, 'Heterotopia', in R. Hutchison (ed.), *Encyclopedia of Urban Studies*, SAGE, Thousand Oaks, CA, pp. 355-6. http://dx.doi.org/10.4135/9781412971973.n133

Kranich, N. 2004, *The information commons: a public policy report, Brennan Center for Justice at the New York School of Law*, viewed 12 November 2013, <http://www.fepproject.org/policyreports/InformationCommons.pdf%3E.

Kuhlthau, C.C. 1991, 'Inside the search process: information seeking from the user's perspective', *Journal of the American Society for Information Science*, vol. 42, no. 5, pp. 361-71. http://dx.doi.org/10.1002/(SICI)1097-4571(199106)42:5<361::AID-ASI6>3.0.CO;2-#

Lefebvre, H. 1996, *The Production of Space*, Blackwell, Cambridge, Mass.

Lessig, L. 2000, *Code and Other Laws of Cyberspace*, Basic Books, New York, NY.

Low, S. M. & Altman, I., 1992, 'Place attachment: A conceptual inquiry', in Altman, I. & Low, S. M. (eds.), *Place attachment*, Plenum Press, New York, pp. 1–12.

Liestman, D., 1992, 'Chance in the midst of design: approaches to library research serendipity', *Reference Quarterly*, vol. 31, pp. 524-532. http://dx.doi.org/10.1002/(SICI)1097-4571(199106)42:5<361::AID-ASI6>3.0.CO;2-#

Makice, K. 2009, 'Phatics and the design of community', *CHI '09 Extended Abstracts on Human Factors in Computing Systems (CHI EA '09)*, ACM, New York, NY. http://dx.doi.org/10.1145/1520340.1520445

Marichal, J. 2010, 'Political Facebook groups: micro-activism and the digital front stage', *Internet, Politics, Policy*, viewed 10 November 2013, http://ipp.oii.ox.ac.uk/sites/ipp.oii.ox.ac.uk/files/documents/IPP2010_Marichal_Paper.pdf .

Marlin-Bennett, R. & Thornton, E.N. 2012, 'Governance within social media websites: ruling new frontiers', *Telecommunications Policy*, vol. 36, no. 6, pp. 493-501. http://dx.doi.org/10.1016/j.telpol.2012.01.002

McLaughlin, M. 2003, 'The use of the internet for political action by non-state dissident actors in the Middle East', *First Monday [Online]* vol. 8, no. 11, viewed 12 November 2013, <http://firstmonday.org/ojs/index.php/fm/article/view/1096/1016%3E.

McLuhan, M. 1964, *Understanding Media: The Extensions of Man,* (1st ed.), reissued by Gingko Press, 2003, McGraw Hill, NY.

Miller, V. 2008, 'New media, networking and phatic culture', *Convergence: The International Journal of Research into New Media Technologies*, vol. 14, no. 4, pp. 387-400. http://dx.doi.org/10.1177/1354856508094659

Morris, M., Teevan, J. & Panovich, K. 2010, 'What do people ask their social networks, and why?: a survey study of status message q&a behavior', *Proceedings of the 28th ACM international conference on human factors in computing systems*, 04/2010, CHI '10, ISBN 1605589292, pp. 1739 – 1748. http://dx.doi.org/10.1145/1753326.1753587

Narayan, B., Talip, B.H., Watson, J. & Edwards, S. 2013, 'A literature review of social media sites as Online Information Grounds: An exploratory study of the ways in which Information professionals use social media', paper presented to the Digital Libraries: Social Media and Community Networks *15th International Conference on Asia-Pacific Digital Libraries 2013 Conference, 9-12 December 2013*, Bangalore, India. Preprint copy viewed 22 November 2013 at < http://eprints.qut.edu.au/63172/>

Oldenburg, R. 1997, *The Great Good Place: Cafes, Coffee Shops, Community Centers, Beauty Parlors, General Stores, Bars, Hangouts, and How They Get You Through the Day.*, Marlowe and Company, New York.

Olson, J.L. 2008, 'Rooted cosmopolitanism in the poetry of Seamus Heaney, Derek Walcott, and Joseph Brodsky', Doctoral thesis, University of Michigan.

Pettigrew, K.E. 1998, 'The role of community health nurses in providing information and referral to the elderly: a study based on social network theory', Doctoral thesis, University of Ontario London, Canada.

Pew Internet Research Center 2012, 'Social Networking Popular Across Globe', viewed 12 November 2013,<http://www.pewglobal.org/files/2012/12/Pew-Global-Attitudes-Project-Technology-Report-FINAL-December-12-2012.pdf>

Pillay, K., Niekerk, B.v. & Maharaj, M. 2010, 'Web 2.0 and its implications for the military', paper presented to the *Workshop on the Uses of ICT in Warfare and the Safeguarding of Peace* Bela-Bela, South Africa.

Postman, N. 1979, *Teaching as a Conserving Activity*, Dell, New York, NY.

Relph, E. 1976, *Place and Placelessness*, Pion Limited, London.

Rheingold, H., 1993, *The Virtual Community*, Perseus Books, New York, HTML version viewed on 12 October 2013, < http://www.rheingold.com/vc/book/>

Richardson, I. 2007, 'Pocket technospaces: the bodily incorporation of mobile media', *Continuum: Journal of Media & Cultural Studies*, vol. 21, no. 2, pp. 205-215. http://dx.doi.org/10.1080/10304310701269057

Rogers, E.M. 1983, *Diffusion of Innovation, 3rd ed.*, The Free Press, New York, NY.

Ronfeldt, D. & Arquilla, J. 1998, *The Zapatista Social Net War in Mexico*, RAND Corporation, Santa Monica.

Rotman, D., Vieweg, S., Yardi, S., Chi, E., Preece, J., Shneiderman, B., Pirolli, P. & Glaisyer, T. 2011, *From Slacktivism to Activism: Participatory Culture in the Age of Social Media*, ACM, Vancouver. http://dx.doi.org/10.1145/1979742.1979543

Rutledge, P. 2010, 'Four ways social media is redefining activism', *Psychology Today*, weblog, 10 November 2013, <http://www.psychologytoday.com/blog/positively-media/201010/four-ways-social-media-is-redefining-activism/comments%3E.

Sack, R.D. 1997, *Homo Geographicus*, Johns Hopkins University Press, Baltimore.

Savolainen, R. 2007, 'Information source horizons and source preferences of environmental activists: A social phenomenological approach', *Journal of the American Society for Information Science and Technology*, vol. 58, no. 12, pp. 1709-1719. http://dx.doi.org/10.1002/asi.20644

Schement, J.R. & Curtis, C. 1995, *Tendencies and Tensions of the Information Age: the Production and Distribution of Information in the United States*, Transaction Publishers, New Brunswick, NJ.

Schmidt, E. & Cohen, J. 2013, 'The central paradox of the new digital age', *New Perspectives Quarterly*, vol. 30, no. 3, pp. 9-13.

Schlosberg, D., Shulman, S. & Zavestoski, S., 2007, 'Democracy and e-rulemaking: Web-based participation and the potential of deliberation', *Journal of Information Technology and Politics*, vol. 4, no. 1, pp. 37-55. http://dx.doi.org/10.1300/J516v04n01_04

Shayegan, D. 1996, ''Le choc des civilisations', *Esprit*, April: pp. 38–53. As translated by Roger Silverstone in What's new about new media?', *New media and Society*, vol. 1, no. 1, pp. 10-82.

Shirky, C. 2008, *Here Comes Everybody: the Power of Organizing without Organizations*, Penguin Press, New York, NY.

Soja, E.W. 1996, *Thirdspace*, Blackwell, Malden, Mass.

Soukup, C. 2006, 'Computer-mediated communication as a virtual third place: building Oldenburg's great good places on the world wide web', *New Media & Society*, vol. 8, no. 2, pp. 421-40. http://dx.doi.org/10.1177/1461444806061953

Spivak, G.C. 1988, 'Can the subaltern speak? ', in C. Nelson & L. Grossberg (eds), *Marxism and the Interpretation of Culture*, University of Illinois Press, Urbana, pp. 271-313.

Sreberny, A. & Khiabany, G. 2010, *Blogistan: The Internet and Politics in Iran*, IB Tauris, London.

Sternberg, J. 2012, *Misbehavior in Cyber Places: The Regulation of Online Conduct in Virtual Communities on the Internet*, University Press of America, Maryland.

Strate, L., Jacobson, R. & Gibson, S.B. 1996, *Communication and Cyberspace: Social Interaction in an Electronic Environment*, Hampton Press, Cresskill, NJ.

Sunstein, C.R. 2004, 'Democracy and filtering', *In Communications of the ACM*, vol. 47, no. 12, pp. 57-9. http://dx.doi.org/10.1145/1035134.1035166

Tapscott, D., 1997, *The Digital Economy: Promise and Peril In The Age of Networked Intelligence*, McGraw-Hill, New York.

Terranova, T. 2004, *Network Culture: Politics for the Information Age*, Pluto Press, London.

Toffler, A. 1980, *The Third Wave: The Classic Study of Tomorrow*, Bantam, New York.

Tuan, F.Y. 2001, *Space and Place: A Perspective of Experience*, University of Minnesota Press, Minneapolis.

Turkle, S. 2011, *Alone Together*, Basic Books, New York, NY.

Valenzuela, S. 2013, 'Unpacking the use of social media for protest behavior: the roles of information, opinion expression, and activism', *American Behavioral Scientist*, vol. 57, no. 7, pp. 920-42. http://dx.doi.org/10.1177/0002764213479375

Varnelis, K. 2010, *The Meaning of Network Culture, Eurozine*, viewed 12 November 2013, <http://www.eurozine.com/articles/2010-01-14-varnelis-en.html%3E.

Velonaki, M., Scheding, S., Rye, D. & Durrant-Whyte, H. 2008, 'Shared spaces: media art, computing, and robotics', *Computers in Entertainment*, vol. 6, no. 4, pp. 1-12. http://dx.doi.org/10.1145/1461999.1462003

Vromen, A. & Coleman, W. 2011, 'Online movement mobilisation and electoral politics: The case of Getup', *Communication, Politics & Culture*, vol. 44, no. 2, pp. 76-94.

Webster, F. 1994, 'What information society?', *The Information Society*, vol. 10, no. 1, pp. 1-23.

Wellman, B. & Gulia, B. 1999, 'Net surfers don't ride alone: Virtual communities as communities', in M. Smith & P. Kollock (eds), *Communities in Cyberspace*, Westview Press, Boulder, CO.

Westerman, D., Spence, P.R. & Heide, B.V.D. 2012, 'A social network as information: the effect of system generated reposts of connectedness on credibility on Twitter', *Computers in Human Behavior*, vol. 28, pp. 199 - 206. http://dx.doi.org/10.1016/j.chb.2011.09.001

Wilson, T.D. 2000, 'Human information behavior', *Informing Science*, vol. 3, no. 2, pp. 49-55, viewed 1 November 2013, <http://inform.nu/Articles/Vol3/v3n2p49-56.pdf >.

Yerbury, H. 2013, 'Young activists, social relations and the internet; comparing young people in Rwanda and Australia', paper presented to the *In Information, Interaction and Impact: i3 Conference, 25-28 June 2013*, Robert Gordon University, Aberdeen, Scotland.

Zuckerman, E. 2013, *Rewire: Digital Cosmopolitans in the Age of Connection*, W.W. Norton, New York, NY.