**From digital counterculture to digital counterhegemony**

An ideological analysis of the techno-political evolution of digital activism

**Abstract**

The analysis of digital activism has been dominated by a techno-determinist approach which interprets the logic of activism and its transformation as reflecting the properties of the technologies utilised. This has been manifested in the popularity acquired by notions as Twitter protest or revolution 2.0 in the news media and in academic discourse. Moving this reductionist interpretation, this article proposes an ideological approach to the study of digital activism and its transformation, which can better account for the combination of political, cultural and social factors involved in shaping digital activism. I identity two main waves of digital activism, corresponding not only to two phases of technological development of the internet (the so-called web 1.0 and web 2.0) but also to two different protest waves, the anti-globalisation movement, and the movement of the squares that began in 2011. I argue that reflecting the seismic shift in perceptions and attitudes produced by the 2008 crash, and the connected shifts in social movement ideology, digital activism has moved from the margins to the centre, from a countercultural posture to a counterhegemonic ambition. I describe this turn as a transition from cyber-autonomism to cyber-populism as the two defining techno-political orientations of the first and second wave of digital activism. Reflecting the influence of neo-anarchism and autonomism in the anti-globalisation movement cyber-autonomism saw the Internet as an autonomous space where to construct a countercultural politics outside the mainstream. To the contrary cyber-populism, informed by the populist turn taken by 2011 and post-2011 movements, sees the Internet as a “popular space”, which needs to be appropriated by ordinary citizens, turned away from consumption activities and towards the purpose of popular mobilisation against the neoliberal elites. This shift goes a long way towards explaining the differences in digital activism practices, and their contrasting views of the internet as a tool and site of struggle.

**1. Introduction**

Digital activism, a term used to describe different forms of activism that utilise digital technology, has undergone a rapid transformation since its emergence at the dawn of the web. From the vantage-point of the mid 2010s it is possible to identify two main waves of digital activism. The first corresponds to the popularization of the internet and the rise of the web in the mid ‘90s which was accompanied by the development of early forms of digital activism. These included tech activists of the anti-globalisation movement, such as those involved in Indymedia and in a number of alternative mailing lists and early hacker activist (or hacktivist) groups. The second coincides with the rise of the so-called web 2.0 internet of social networking sites as Facebook, YouTube and Twitter, which has been accompanied by the rise of hacker collectives as Anonymous and Lulzsec, and the “social media activism” of 15-M, Occupy and other movement of the squares who have used social networking sites as platforms of mass mobilisation. But to what extent are these two phases of digital activism simply a reflection of the evolution of digital technology, and of the shift from web 1.0 to web 2.0, as they are often portrayed? Is the difference between them to be understood merely as resulting from the changing material affordances of digital technology? Or is there something more to the equation?

 The debate about the transformation of digital activism has so far tended to follow a typical techno-deterministic tendency which reads technology as the ultimate cause of social transformation. This conception is belied by the popularity acquired by terms as Revolution 2.0 (Ghonim, 2012), “wiki-revolution” (Ferron and Massa, 2011) or “Twitter revolution” (Morozov, 2009), widely used in news media and scholarly accounts. The underlying rationale of these expressions is that the adoption of a certain kind of platform, such as Facebook or Twitter automatically defines the form of activism channeled through it. This approach stems from a simplistic view of technology’s effects, deeply informed by the media theory of Marshall McLuhan and his famous moniker “the medium is the message” (1967, 2011). While this theory has important things to say about the way technology structures action, it tends to neglect a number of non-technological factors – socio-economic, political and cultural ones – that intervene in defining activism’s content. To go beyond the simplified view of technology as an un-mediated force reshaping organisational structures and protest practices after its own image, the analysis of digital activism needs to recuperate an understanding of ideology, and the way it interacts with technology in shaping activist practices.

 Adopting this ideological perspective to the study of digital activism, in this article I propose a periodisation of digital activism in two different waves, each with its own ideological characteristics. To this end I draw on my previous theorizing on digital activism (Gerbaudo, 2012, 2016), and in particular on my discussion of cyber-autonomism and cyber-populism as the defining techno-political orientations of the anti-globalisation movement and the movement of the squares respectively. Anti-globalisation activists adopted a techno-political approach that I describe as *cyber-autonomist*. This approach, which was deeply informed by the 70s and 80s counterculture and DIY culture with their emphasis on the struggle for the liberation of individuals and local communities from the interference of large-scale institution, viewed the Internet as a space of autonomy. The movement of the squares has instead adopted what I describe as a cyber-populist attitude which sees the Internet as a space of mass mobilisation in which atomized individuals could be fused together in an inclusive and synchretic subjectivity. These two techno-political orientations reflect the process of technological evolution from the more elitist web 1.0 to the massified web 2.0 of social network sites. But their understanding also needs to encompass a plurality of other factors, and account for the seismic shift in attitudes and perceptions caused by the financial crisis of 2008 and connected ideological developments. Paralleling the turn of social movements from anarcho-autonomism to populism as the dominant contestational ideology, digital activism has transitioned from a view of the Internet as a space of resistance and counter-cultural contestation, to its understanding as a space of counter-hegemonic mobilisation.

 The article begins with a theoretical discussion of different factors involved in the transformation of digital activism, and in particular the relationship between technology, politics and culture. I highlight the need to give more weight to political, cultural and ideological factors in the understanding of digital activism beyond the techno-determinism that currently dominates the literature. I continue by demonstrating how ideological shifts have shaped the transformation of digital activism, by referring to a shift from cyber-autonomism to cyber-populism, aand referring to a number of concrete examples. I conclude with some reflections of the implications for future research about digital activism and the need to bring ideology back to the analysis of digital protest.

**2. Techno-politics beyond techno-determinism**

Digital activism is a form of activism that by definition brings into question the relationship between politics and technology, or to use a term that has become *en vogue* among activists and researchers in recent years, the nature and dynamics of “techno-politics”. Techno-politics is a term that has been coined by Italian politician and scholar Stefano Rodotà (1997) to express the nexus between politics and technology, and has since been popularised by activist scholars as Javier Toret (2013) in Spain to define the new field of analysis raised by the development of digital activism. Referring to the two constitutive concepts in the notion of techno-politics - technology and politics - one can argue that up to this point the scholarship on digital activism has excessively focused on the first element, while neglecting the second. Scholars have tended to read political transformation as resulting from technological transformation, overlooking that also the converse is the case, namely that changes in political and ideological orientations modify the way technology is used.

 The techno-deterministic nature of much contemporary scholarship on digital activism is seen in the way in which the nature of digital activism is understood as deriving directly from specific properties of technology. This is clearly seen in the debate about the effects of media affordances on digital activism. An example, is the book by Jennifer Earl and Kim Kimport (2011) and the way it approaches digital media as a set of apparatuses that lower costs to participation and thus facilitate new forms of interaction that were previously impossible. This account proposes an instrumental understanding of technology, framed as a phenomenon external to the social field in which it intervenes. This goes hand in hand with an economic understanding of media effects, as seen in the language of benefits and costs, which neglects their symbolic and cultural dimension. A similar critique can be made to the work of Lance W. Bennett and Alexandra Segerberg, and their theory of connective action (2012a, 2012b) which claims that social media with their allowing for increased connectivity, overcomes the collective logic of earlier social movements, and their need for leadership and collective identity (2012). What is overlooked in this context, is that while undoubtedly the affordances of digital technology determine the field of operation for digital activism, they can be turned towards very different political ends and coupled with very different organisational formats.

 A techno-determinstic element is arguably also present in the work of Manuel Castells on digital activism. In truth Castells’ account is more nuanced than many accounts originating from the field of political science, since it also accounts from a sociological viewpoint for a number of cultural factors involved in shaping the internet and digital activism. For example, Castells has argued that an important factor to understand the internet is the influence of the libertarian spirit of the 1960s and 1970s protest movements and the way it has inspired the de-centralised architecture of the internet (2004). However, Castells’ theory of the network society, and the view that digital technology as ushering in a morphological shift away from the pyramidal structure of Fordist society, and towards network-like structures proper to the information society is evidently techno-deterministic. Certain technological properties are seen as necessarily translating into certain organisational forms bearing the same logic. This view is particularly problematic when it comes to the analysis of digital activism, since it tends to propose of digital activism as an horizontal and leaderless space, a view that I have rebuked in my previous work, demonstrating how to the contrary digital activism is accompanied by the rise of new forms of leadership (2012, 2016).

 In his more recent work (2009) Castells has argued that the diffusion of social media as Facebook and Twitter has transformed internet communication and introduce a new media logic which he describes as mass self-communication, which combined the logic of self-communication of face-to-face, telephone and other one-to-one media, with the mass and one-to-many of mass media. According to Castells this logic of communication deeply informed the 2011 movements of the Indignados, Occupy and the Arab Spring, and it strongly contributed to their mass outreach (2012). This view provides with a powerful rationale to understand the way in which the second wave of digital activism has managed to go beyond the minoritarian politics of the first wave. Social media have provided the necessary technical conditions for new forms of digital activism to arise. However, Castells tends to neglect how in this shift also ideological and political factors have concurred. As I will demonstrate in the course of the article, without a change in ideology the new opportunities of mass mobilisation offered by social media would have not been reaped by protest movements.

The work of Jeffrey Juris, a former student of Manuel Castells has followed a similar line of reasoning, reading the transformation of activism as resulting directly from technological transformation. In his book *Networking Futures* (2008) Juris argued that the anti-globalisation movement was animated by the imaginary of the network channeled by new media technologies, including the alternative news site Indymedia, and alternative mailing lists, which allowed for an horizontal communication within activist groups. In his more recent work about the movement of the squares of 2011, Juris has argued that the changes that the novelty of the second wave of digital activism, derive from the shift from web 1.0 to web 2.0 and the new mass outreach affordances of social media platforms. According to him this technological transition has facilitate a shift from the logic of networking of anti-globalisation activists, to what he describes as a logic of aggregation. This logic has been supported by the “virality” of corporate social networking sites as Facebook and Twitter with their capacity for rapid contagion, and then manifested physically in the occupied squares of 2011 teeming with large crowds (2012).

 While these accounts are right in identifying the influence played by technology on contemporary politics, they often tend to adopt a reductive understanding of this relationship of causation. A certain type of technological arrangement is seen as automatically leading to a certain logic of action, without any further political or cultural mediation. However, digital activism is not just a technical process, but also a political, cultural and social one. All these dimensions need to be taken into account if we are to understand why digital activism has developed in certain way and why it has changed through time. To overcome the techno-deterministic bias of contemporary debates it is necessary to pay attention to the complex imbrication between politics, culture and technology, with specific reference to a) the relative autonomy of politics from technology; b) the symbolic and not only material character of technological processes; c) the role of technology as a mediator of social relationships and ways of life that cannot be reduced to technology alone.

 First, a key problem in techno-deterministic accounts is the way in which technology is seen as the independent variable always bound to determine the logic of action of social movements in a certain direction. This approach neglects the *relative autonomy of political and cultural processes from technology*. The disregard for political content reflects the influence of Marshall McLuhan’s famous assertion that the medium is the messages, namely the idea is that the real content of communication is the type of relationship it constructs among the subjects involved in communication (1969, 2011). However, technology does not single-handedly define activism. Todd Wolfson in his book *CyberLeft* looking at the anti-globalisation movement and its use digital media, highlights how digital media practices are accompanied by an ethos and cultural logic, which approch the internet not just as a tool but also a space of solidarity in which different struggles can unite (2014: 17). Similarly Barassi and Trere have argued that besides the evolution of technology it is important to take into account the lived experience of the activists who utilize that technology, and the way they deconstruct assumptions about the nature and purpose of technology (2012). Finally, Gabriella Coleman has argued that hacking is not just a technical practice but also a social one which carries specific ethics and aesthetics, aspects which are influenced by, but cannot be reduced to technology (2013).

 Second, it is important to account for the fact that technology is not just a material apparatus containing certain properties. *Technology is also a symbolic object* to which a number of meanings and cultural uses are attached. This is an aspect that has been widely documented in the literature on the domestication of media and technology (Berker, Hartmann and Punie, 2005) and in the cultural study of science and technology (Menser and Aronowitz, 1996, Van Loon, 2002). Scholars have shown that technologies can be associated with very different meanings depending on the different social and cultural contexts in which they are deployed and the values and beliefs of the groups that utilise them. Indeed the way technology is used can take very different forms in the context of different political phenomena. For example, traditional parties use the Internet in very different ways than social movements or emerging parties as Podemos in Spain and the 5 Star Movement in Italy. It is thus necessary to adopt a more holistic view of techno-politics, accounting for the way politics is not only determined by but also determines technology, and the subjective meanings associated with technology and its use.

 Third, we should avoid looking at technology instrumentally, as a self-standing tool but appreciate the way in which *technology mediates social relationships*. For example, in the case of Marx and Engels account of industrial technology, what mattered was not just the way in which it allowed for new forms of production, but also the fact that it materialised a relationship of oppression of the bourgeoisie over the proletariat (1848/2002). Techno-determistic analysis tends to bracket this aspect, overlooking the kind of relationships technology mediates, be they relationship of oppression, leadership or cooperation, and the way in which the use of technology is embedded in broader social ecologies. Merlyna Lim has demonstrated how the effectiveness of social media in circulating information relevant to the protest movements that eventually led to the Tahrir protests in 2011, was the presence of thick offline social networks. These were exemplified by the way in which cab drivers in Cairo facilitated the circulation of information via word-of-mouth, repeating to others what they had heard from passengers about “what Facebook was saying” on any given day (2012). The effects of technology thus depend not just on its affordances but also on the social relationships and ways of life with which it is entangled.

 These different critiques call for a more nuanced account of the relationship between technology and politics, which may render not just how technology influences politics, but also how politics influences technology. In my contention the way to achieve this end is to resurrect the notion of ideology, hereby understood in the neutral sense as a system of values and beliefs adopted by political and social actors constitutes. Ideology is a term that provides a way to explore the complex imbrication of cultural, political and social factors which alongside technology influence the way in which digital activism is performed. In fact, a number of scholars have already began to explore how different technological practices carry their own ideologies. For example Victor Turner has argued that the development of cyberculture was informed by techno-utopianism and techno-libertarianism, which was in turn informed by the 70s and 80s counterculture, with their emphasis on individual self-realisation and their suspicion for large-scale institutions (Turner, 2010). Richard Barbrook and Andy Cameron argued that the rise of the digital economy in the 1990s was informed by an inchoate ideology they described as the Californian ideology: a techno-libertarian worldview bringing together hippies and yuppies (1995). An ideological element is also clearly visible in social media. Social media are in fact not just a set of applications with given material affordances. They also carry their own ideology, manifested for example in the language, of sharing, crowd-sourcing, friendship and collaboration they have introduced (see for example, Fuchs, 2013, 98, Lovink 2011, Van Dijck, 2014: 172, Author, 2014). Building on this literature about the nexus between technology and ideology in the continuation of this article I develop a periodisation of digital activism in two waves with distinct ideological characteristic

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**3. 1990s-2010s: digital activism from counterculture to counterhegemony**

Looking at the transformation of digital activism through the lens of ideology, allows to appreciate the way in which political and cultural factors intervene in shaping the content that is channeled via digital technology As I will endeavour to show, while digital activism evidently reflects the transformation in the ecosystem of digital communication (Treré, 2012) it is also informed by the changing attitudes of protest movements. Thus instead of the technological evolutionist view of an activism 1.0 followed by activism 2.0, paralleling the transition from web 1.0 to web 2.0, I propose a periodisation of digital activism in two waves which corresponds to two phases of social movement mobilisation. These two protest phase are the anti-globalisation movement around the turn of the millennium and the movement of the squares of 2011. These two waves of protest have shared many similarities but have also displayed different ideological orientations, which makes interesting case studies for comparative analaysis. Namely while the anti-globalisation movement’s dominant ideology was anarcho-autonomism as a combination of anarchism and autonomism, the movement of the squares has been characterised by the influence of populist ideology (Gerbaudo, forthcoming). As I will endeavour to show this ideological shift in social movements maps onto the changing techno-political orientations of social movements: the cyber-autonomism of the first wave, and the cyber-populism of the second wave of digital activism.

 The transformation of digital activism in the last decades can be viewed schematically as a move from the margins to the centre, of the political arena, from a countercultural politics of resistance to a counterhegemonic politics of popular mobilisation. While early form of digital activism conceived of the internet a a separate countercultural space, the second wave of digital activism has approached the internet as part of a political mainstream to be occupied by protestors (Gerbaudo, 2015). My understanding of the evolution of digital activism and of the presence of two distinct waves comes close to the work of Athina Karatzogiani a media scholar who has been working on digital activism since the early 2000s. Karatzogianni proposes the existence of 4 waves of digital activism (2015). The first one from 1994 to 2001 coincides with the early phase of the anti-globalisation movement, from the Zapatista uprising in Mexico in 1994, to the protests in Genoa 2001, which were violently crushed by police. The second phase from 2001 to 2007 comprises the second phase of the anti-globalisation movement, and its rise to prominence worldview. The third phase which she describes as the “spread of digital activism”, refers to the migration of digital activism to BRICS and other countries beyond Europe and the US where digital activism had first developed. The fourth phase finally is when digital activism invades mainstream politics, with the rise of phenomena as Wikileaks, the Arab Spring uprisings, and the Snowden affair, making digital activism, not anymore a marginal phenomenon but one that is at the very centre of political conflicts.

 Rather than four phases as proposed by Karatzogianni, my analysis focuses on two main waves, the first taking place around the turn of the millennium, and second unfolding in late noughties and 2010,and explains the transformation as resulting from changes in ideology. Focusing on ideology does not mean to deny the role played by technological factors, and in particular the shift from web 1.0 of static websites to web 2.0 of social network sites. Indeed as argued by scholars as Castells and Juris, the mass character of contemporary movements has been facilitated by mass outreach opportunites offered by social media. Introducing a focus on the question of ideology meas instead to explore the way in which technological factors have been combined with changes in attitudes and motivations, that have significantly shaped the actual practices of communication. For this reason it is necessary to consider the ideological evolution that has taken place in the field of social movements, reflecting the transformation of the economic, social and political transformation engendered by the 2008 crash.

 The anti-globalisation movement was a multi-faceted movement that encompassed very different ideological streams including trade unions, Trotzkysts groups, environmentalist, third world development NGOs, and religious organisations. However at its core this movement and especially its younger section was deeply informed by the ideology of autonomism or anarcho-autonomism, a multifaceted ideology drawing inspiration from post-68 anarchist and Marxist autonomist movement. This ideology centered on the project of a politics of autonomy, away from the state and the market and attempting to construct a self-governed space of “the common”. The movement of the squares has instead turned towards leftwing populism, or more specifically to a peculiar brand of populism which I describe as citizenism, that is a populism of the citizen, rather than a populism of the people. This ideology centers on a bottom-up recuperation and reclamation of democracy and political institutions by ordinary citizens, starting on their gathering in public spaces and on social media.

 The opposition between anarcho-autonomism and populism maps onto the opposition between cyber-autonomism and cyber-populism, as the dominant techno-political orientations of the first and second wave of digital activism.

Anti-globalisation activists pursued a cyber-autonomist strategy that saw the internet as a space to construct islands of resistance outside of the control of state and capital. As the name suggests this communication logic revolved around the idea of creating autonomous spaces of communication on the internet, away from a society controlled by capital and the state. As I have proposed in my previous work about this issue (2014) activists were convinced that setting up an autonomous communicative infrastructure was a fundamental condition for any genuine alternative communication. Building on the tradition of alternative media in the 60s, 70s, and 80s, in the context of the underground press, fanzine cultures and pirate radios, tech activists hoped to use the internet to break the monopoly of corporate news media responsible for channeling neoliberal propaganda and shutting down all alternative points of view. This vision lay at the foundation of an array of alternative media initiatives pursued between the late 90s and early 2000s (Pickard, 2006, Juris, 2008).

The most visible manifestation of this strategy was Indymedia, the first global alternative news initiative with tens of editorial nodes all over the world. At the height of counter-summit protests, Indymedia became the veritable voice of the anti-globalisation movement and it also constituted a fundamental organisational infrastructure for protestors, with editorial nodes often doubling up as political collectives directly involved in organising protest campaigns. Besides Indymedia, alternative service providers (ISPs) such as Riseup, Aktivix, Inventati and Autistici catered for the internal communication needs of the movement. They provided secure personal email accounts as well as listservs allowing conversations on a number of topics of interest, ranging from protest organisation to squatting and permaculture. The imaginary underlying all these activities was one of “Islands in the Net”, as expressed in the name of one of the most important activist ISPs in Italy. Activists thought of the internet as something akin to the Temporary Autonomous Zones (T.A.Z.) described by Hakim Bey, a space comprising temporary islands in a rebel archipelago outside of the control of State and capital

Digital activism in the movement of the squares has instead been characterised by a techno-political orientation I have elsewhere (2014) described as cyber-populism. By this term I define a techno-political orientation that regards the mass web of commercial internet services controlled by monopolistic corporations such as Facebook, Google and Twitter, as a space that despite its inherent capitalist biases needs to be appropriated by activists, and whose mass outreach capabilities need to be harnessed and used for their own ends. Rather than creating an alternative internet – a free, self-managed and non-commercial space of communication - contemporary tech activists have been more concerned with harnessing the outreach capabilities of corporate social networking sites such as Facebook and Twitter.

The examples of this cyber-populist trend abound in the wave of 2011 protests

, from the Facebook page, Kullena Khaled Said in Egypt, to call hundreds of thousands to take to the streets, to the work of activists in Spain, Greece, the US, Turkey and Brazil, who have used social media as a means for mass mobilisation. Instead of trying to create alternative spaces, digital activists within these movements attempted to occupy the digital mainstream, appropriating social media as people’s platforms. This strategy bears the mark of the majoritarian and popular ambition of the Occupy wave, and the fact that these new movements do not content themselves with constructing minoritarian spaces of resistance. By using corporate social networking platforms, activists invade spaces they know do not belong to them and over which they have little control, but they do so in the persuasion that it is necessary to take them in order to construct forms of popular mobilation matching the technical conditions of our era. Instead of aiming to create temporary autonomous zones on the internet as their predecessors in the anti-globalisation movement, the new generation of digital activists harboured the desire to break out of their life-style ghettoes and reconnect with the 99% of the population they purported to fight for.

 What is important in this parallelism between the transition between cyber-autonomism and cyber-populism and the anarcho-autonomism and populism of the anti-globalisation movement and the movement of the squares for the purpose of the present article, is the fact that it demonstrates how ideological factors can intervene in shaping the way technology is utilised. Digital activism certainly reflects the nature of technological affordances. For example the process of massification of the web, with the growth of intenet users to about half of the world goes a long a way to explaining the shift from a minoritarian to a majoritarian logic of mobilisatoin. However, technological transformation is filtered through ideological narratives and worldviews which contribute in shaping the way activists conceive of the Internet as a political battlefield. The potential for mobilisation inherent in a certain technology is not the automatic result of its affordances but rather a combination of technological and ideological factors.

**4. Conclusion**

In order to understand the transformation of digital activism it is necessary to pay attention not just to the materiality of technology, but also the way in which technology reflects a number of cultural, social and political factors, that come to shape its understanding and use. This is why it is imperative to recuperate the notion of ideology, understood as the system of beliefs and values that inform the activist worldview and in so doing also shapes their understanding and use of technology. As I have demonstrated in this article the difference between the first wave of digital activism around the turn of the millennium, and the second wave in the late 2000s and 2010s, has been shaped not just by the transformation of digital technology and the shift from web 1.0 to the web 2.0 of social network sites but also by changes in the ideology of connected social movements, and in particular the shift from anarcho-autonomism to populism as the dominant contestational ideology. This ideological turn has translated in the context of digital activism in a shift from cyber-autonomism to cyber-populism, two techno-political orientations which carry different assumptions of the role of digital technology as both a means and site of struggle. What is required going forward is research that can better account for the way in which ideology shapes activist practices and their content. This ideological perspective would allow us to overcome some of the shallowness of much contemporary analysis of digital activism and better render the way in which it reflects the themes, attitudes, and motivations of connected social movements.

**References**

Barassi, V., & Treré, E. (2012). Does Web 3.0 come after Web 2.0? Deconstructing theoretical assumptions through practice. *New media & society*, *14*(8), 1269-1285.

Bennett, W. L., & Segerberg, A. (2012). The logic of connective action: Digital media and the personalization of contentious politics. *Information, Communication & Society*, *15*(5), 739-768.

Bennett, W. L., & Segerberg, A. (2013). *The logic of connective action: Digital media and the personalization of contentious politics*. Cambridge University Press.

Berker, T., Hartmann, M., & Punie, Y. (2005). *Domestication of media and technology*. McGraw-Hill Education (UK).

Coleman, E. G. (2013). *Coding freedom: The ethics and aesthetics of hacking*. Princeton University Press.

Earl, J., & Kimport, K. (2011). *Digitally enabled social change: Activism in the Internet age*. Mit Press.

Fenton, N., & Barassi, V. (2011). Alternative media and social networking sites: The politics of individuation and political participation. *The Communication Review*, *14*(3), 179-196.

Ferron, M., & Massa, P. (2011). The arab spring| wikirevolutions: Wikipedia as a lens for studying the real-time formation of collective memories of revolutions. *International Journal of Communication*, *5*, 20.

Fuchs, C. (2013). *Social media: A critical introduction*. Sage.

Gaver, W. W. (1991, April). Technology affordances. In *Proceedings of the SIGCHI conference on Human factors in computing systems* (pp. 79-84). ACM.

Ghonim, W. (2012). *Revolution 2.0: The power of the people is greater than the people in power: A memoir*. houghton Mifflin harcourt.

Hands, J. (2011). *@ is for activism: Dissent, resistance and rebellion in a digital culture*. Pluto Press.

Juris, J. S. (2008). *Networking futures: The movements against corporate globalization*. Duke University Press.

Juris, J. S. (2012). Reflections on# Occupy Everywhere: Social media, public space, and emerging logics of aggregation. *American Ethnologist*, *39*(2), 259-279.

Karatzogianni, A. (2015). *Firebrand Waves of Digital Activism 1994-2014: The Rise and Spread of Hacktivism and Cyberconflict*. Palgrave Macmillan.

Lim, M. (2012). Clicks, cabs, and coffee houses: Social media and oppositional movements in Egypt, 2004–2011. *Journal of Communication*, *62*(2), 231-248.

Lovink, G. (2011). *Networks without a cause: A critique of social media*. Polity Press.

Marx, K., & Engels, F. (1848/2002). *The communist manifesto*. Penguin.

Mattoni, M. A. (2012). *Media practices and protest politics: How precarious workers mobilise*. Ashgate Publishing, Ltd.

McLuhan, M., & Fiore, Q. (1967). The medium is the message. *New York*, *123*, 126-128.

McLuhan, M., Gordon, W. T., Lamberti, E., & Scheffel-Dunand, D. (2011). *The Gutenberg galaxy: The making of typographic man*. University of Toronto Press.

Menser, M., & Aronowitz, S. (1996). On cultural studies, science, and technology. *Technoscience and cyberculture*, 7-28.

Morozov, E. (2009). Moldova’s Twitter revolution. *Foreign Policy*, *7*.

Rodotà, S. (1997). Tecnopolitica, Bologna. *Il Mulino*.

Toret, J. (2013). Tecnopolítica: la potencia de las multitudes conectadas. El sistema red 15M, un nuevo paradigma de la política distribuida. *IN3 Working Paper Series*.

Treré, E. (2012). Social movements as information ecologies: Exploring the coevolution of multiple Internet technologies for activism. *International Journal of Communication*, *6*, 19.

Tufekci, Z., & Wilson, C. (2012). Social media and the decision to participate in political protest: Observations from Tahrir Square. *Journal of Communication*, *62*(2), 363-379.

Turner, F. (2010). *From counterculture to cyberculture: Stewart Brand, the Whole Earth Network, and the rise of digital utopianism*. University Of Chicago Press.

Van Dijck, J. (2013). *The culture of connectivity: A critical history of social media*. Oxford University Press.

Van Loon, J. (2002). *Risk and technological culture: Towards a sociology of virulence*. Psychology Press.

Wolfson, T. (2014). *Digital rebellion: The birth of the cyber left*. University of Illinois Press.