

Chapter One

Promise and Practice in Studies of Social Media and Movements

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The recent protests during the ‘Arab Spring’ and in the wave of ‘Occupy’ movements have renewed interest in the use of the internet and especially social media by social movements. Digital social media technologies offer a low-cost way to reach out to large constituencies and to communicate in many-to-many settings. In addition, with the spread of mobile- and smartphones, this technology is ubiquitously available. These characteristics have led to a widespread adoption of social media in protest mobilizations. Social movements now regularly use social media to communicate and to mobilize for their actions. Are social media, when it comes to social movements and protest, thus the leaflets and political posters of the early twenty-first century? Or do they, as some authors have claimed, fundamentally alter the conditions for the emergence of protest and social movements? May they even cause social movements, as the notion of ‘Twitter’ or ‘Facebook’ revolutions suggests?

In this chapter I address these questions by discussing the findings of existing studies on social movements and social media. I assess to which extent some authors’ claims about the fundamental importance of social media technologies in recent protests and uprisings (e.g., Howard and Husain 2013) can be substantiated in empirical studies of protest mobilizations or whether the results lend more support for the claim that social media did not fundamentally influence the mobilization dynamics (e.g., Brym et al. 2014). The aim is not to explore all aspects of the quickly growing research literature, but to discuss some of the more prominent recurring findings along with the literature questioning them, and to offer some structuring elements for relating the various studies to each other.

To do this, this chapter starts with a quick overview over the use of internet technologies by social movements since the 1990s, and discusses four general claims about the relationship between the internet and social media on the one hand, and social movements and protest on the other. It then proceeds to a closer look at recent empirical studies of protest and social media, closing with an evaluation of the current knowledge and remaining research gaps in this field. Special attention is paid to the question how current digital communication tools interact with more established elements in social movements' repertoires of action.

A VERY SHORT HISTORY OF SOCIAL MOVEMENTS AND THE INTERNET

Social movements have been quick to adopt digital computer networks as communication tools for internal planning and deliberation and to reach out to the general public. Long before the invention of the World Wide Web led to the development of the internet as we know it today, already by the end of the 1980s social movement activists created—linked through the Association for Progressive Communications (APC)—mailbox-based computer networks to facilitate communication and information exchange among geographically dispersed activists (Harasim 1993; Lökk 2008). But these early uses of computer networks among movement activists have hardly been noticed by social scientists, and within their movements those activists who were using the networks were clearly a small minority.

This has changed dramatically when the Zapatistas on 1 January 1994 began their struggle against neoliberalism and for the rights of indigenous people in the Mexican state of Chiapas. The Zapatistas, with their charismatic leader Subcommandante Marcos, skillfully used the internet to spread their message across the world. Their 'insurrection by internet' (Knudson 1998) led for the first time to speculations that the internet would facilitate new forms of transnational or even global mobilization, provide social movements with 'historically new organizational capabilities' (Clever 1998, 631) and provide the tools and a virtual public sphere for wide participation in direct democratic processes.

After this initial euphoria about the potential the internet would offer to social movements, the protests against the WTO meeting in Seattle in 1999 sparked the next round of scholarly interest in the relation between social movements, protest and the internet (Van Aelst and Walgrave 2002; della Porta and Mosca 2005; Juris 2005). The internet seemed to perfectly fit to this 'movement of movements' with its nonhierarchical, dispersed and global structure. Special attention was paid to the creation of Indymedia, a network of independent media centres where everybody was able to publish news and

commentary (Kidd 2003). During the protests in Seattle, and during subsequent protests and mobilizations of various social movements, Indymedia has provided a partisan news channel where activists publish their interpretation of the events while the events are happening. To some degree, Indymedia was the digital pendant to the foundation of alternative leftist newspapers in the early (*Libération*, France 1973) or late (*die tageszeitung*, Germany 1978) 1970s. In both cases, movement activists or sympathizers saw a need to create an alternative to the established mainstream press that—in the eyes of the activists—disregarded or misinterpreted the movement and its activities. For the traditional paper-based newspapers, the notorious problem was running them as profitable enterprises and over time they evolved into moderately left daily newspapers written by professional journalists. For Indymedia, financial sustainability also emerged as a problem and resulted in the closure of several Indymedia sites (Giraud 2014), even though the costs for running the web servers on open source software are extremely low in comparison to the production of a traditional newspaper. But in hindsight, Indymedia's more serious problem is that it never managed to reach a similarly broad audience beyond the movements that are using it. Many Indymedia sites have evolved into websites where movement activities are announced and discussed among activists. This has led some authors to claim that Indymedia has failed (Ippolita, Lovink and Rossiter 2009), whereas others interpret the prevalence of debates as a positive sign for the development of alternative democratic online counterpublics (Miloni 2009).

With internet use becoming an integral part of everyday life, its use in protest campaigns and by social movements has meanwhile lost the air of the spectacular. And consequently, since the early 2000s research has branched out and now covers a broad variety of online activism. In an overview of research findings, Jennifer Earl and her collaborators have categorized social movements' internet use into four types of usage patterns: brochure-ware, online facilitation of offline activism, online participation and online organizing (Earl et al. 2010, 428), where brochure-ware stands for internet use that basically replaces flyers, leaflets and brochures with websites and mailing lists. Online facilitation of offline activism adds simple interactive elements to facilitate coordination between activists, online participation provides tools to interact with the addressees of the protest (e.g., online petitions) and online organizing shifts the main mobilizing activities to the internet.

More recently, a new series of massive protest mobilizations that began with the Arab Spring in December 2010 and included the 15-M protests in Spain (March 2011), the Occupy protests in the United States and in several European countries (September 2011), and the protests in Istanbul's Taksim Gezi Park (May 2013) has refocused public and scholarly attention on the specific interaction between large-scale mass protests and social media

(Castañeda 2012; Costanza-Chock 2012; Tufekci and Wilson 2012; Gamson and Sifry 2013; Howard and Hussain 2013; Tremayne 2014). This last wave of scholarly interest concentrated heavily on social movements' use of commercial global social networking and social media sites like Facebook and Twitter, thus shifting the attention from social movements' attempts to create alternative online publics with their own tools and technologies, to social movements' use of existing corporate-provided and corporate-controlled social media tools to facilitate or enable mobilization.

Looking back on twenty years of research on social movements and social media, we can see public and scholarly attention shifting with the evolution of the technology, focusing always on social movements' and protesters' adoption of the most recent technological tools. This focus on the newest internet technologies goes along with the recurring question whether these new technological tools may offer new opportunities for collective action unavailable to previous generations of activists. In addition, this dynamic is also driven by the various social movements' ability to mobilize large-scale protests which have again and again surprised established news media and many social scientists. For most pundits, the insurrection of the Zapatistas, the Global Justice Movement's protests in Seattle, the Arab Spring and Occupy Wall Street were completely unexpected events in times where social movements were often seen as relatively weak and marginal political actors. In this pessimist frame, technology seemed to offer an explanation for the surprise about these unforeseen mobilizations, leading then to a rather optimistic interpretation of the role of technology.

CYBER-OPTIMISTS, PESSIMISTS AND REALISTS?

These technology-focused and often enthusiastic interpretations of recent social movements have usually been complemented by more pessimistic or even dystopian interpretations of the new technological developments. Previous overviews on research about social movements and the internet have identified three general perspectives which have been labeled cyber-optimists and cyber-pessimists, with a large group of realists in between (Earl et al. 2010; Gerbaudo 2012; Torres Soriano 2013; Lutz and Hoffmann 2014). Cyber-optimists assume that the new technology would not only facilitate, but genuinely enable, protest. Cyber-pessimists, on the other hand, either argue that the internet would not have a substantial effect on social movements' ability to mobilize, or that it would even have a negative effect. Between these poles, the largest group of scholars acknowledges effects of new internet technologies but argues that these effects 'tend to be in degree and do not require new theoretical explanations, or even substantial alteration to existing theories' (Earl et al. 2010, 427).

Unfortunately, this neat categorization obscures more than it reveals, because it at least implicitly suggests that the group labeled cyber-optimists and the cyber-pessimists each share a distinct set of assumptions and convictions about the internet and social movements. But a closer look at the writings of authors associated with these groups shows that neither camp is in any way homogenous. The optimism of the first group is based on differing and partially competing assumptions, as is the pessimism of the second. Moreover, optimists do not necessarily answer to the qualms of the pessimists and vice versa.

In order to assess the existing research, it is more helpful not to start from the authors' overall evaluations of the internet or of specific internet technologies but to focus on their assumptions about the relationship between internet technologies and social movements. Following this perspective the existing literature on internet and social movements revolves around four general claims about this relationship. Some of these claims are specific to individual authors, some are shared by several. For the sake of convenience, I phrase these claims here as positive relationships, but obviously the pessimists formulate the inverse claims to denote a negative relationship. The four general claims are:

Claim 1: The internet solves the problem of transaction costs

Claim 2: The internet solves the (rational choice) problem of collective action

Claim 3: The internet corresponds to the conflicts of the network society

Claim 4: The internet enables new form of protest/organizing

In the following sections, I discuss each of these claims and evaluate their empirical and theoretical foundations.

The Internet Solves the Problem of Transaction Costs

Clay Shirky, the US writer and academic, and 'king of the techno-optimists' (Gerbaudo 2012, 7), builds his argument about the benefits of modern internet technologies for social movements on the idea of diminishing transaction costs. In his book about organizations and group formation (Shirky 2008), he argues that the key contribution of social media tools is their ability to radically reduce—if not completely remove—transaction costs for collective action. Shirky writes that social media allow ordinary citizens to share information and coordinate their activities on a previously unknown level. Before the internet, it was hard and relatively costly (in terms of time and resources) to inform people about a perceived injustice and to organize them in a collective action against it. Now, Shirky argues, ordinary people can arrange events 'without much advance planning' (Shirky 2008, 175) because they no longer have to rely on slow and costly traditional means of contacting and coordi-

nating dispersed individuals. As a result, '[t]he collapse of transaction costs makes it easier for people to get together—so much easier, in fact, that it is changing the world' (Shirky 2008, 48).

In his argumentation, Shirky draws on Yochai Benkler, who, in his book *The Wealth of Networks* (Benkler 2006), had developed a somewhat similar thesis. Benkler argues that the internet offers the possibility to coordinate distributed collaboration on a previously unknown scale and with minimal costs. It enables what Benkler calls peer production, that is 'effective, large-scale cooperative efforts' (Benkler 2006, 5), on a global scale and under conditions of abundance, by rapidly reducing the transaction costs of creating knowledge. Under these conditions the likelihood of dispersed individuals to cooperate would increase significantly (for a more detailed discussion, see Haunss 2013, 230).

While the argument that the internet would have the potential to radically reduce transaction costs and thus enable forms of collaboration that were previously almost impossible is compelling, it offers a solution for a problem with at least dubious relevancy for social movements. Shirky argues that the most serious obstacle to the 'basic human instinct' (Shirky 2008, 60) to be part of a group was until now too high transaction costs. But social movements are not simply the result of group formation. While Wikipedia—the prime example of peer production—is certainly impressive in terms of enabling cooperation among otherwise unconnected and geographically dispersed individuals, it is not such a good example for a powerful social movement. Precisely because, in order to act collectively as a political actor, social movements have to define a problem, create a shared interpretation, engage in continued interaction with an opponent, find allies and create a collective identity. Radically lowering transaction costs will facilitate some of these tasks, but it will not help much with others. Consequently, in existing social movement research, high transaction costs have usually not been identified as the most pressing problem social movements face. High transaction costs have been acknowledged to pose a significant problem for transnational movements (Tarrow 1998, 235), but even for them the internet lowers only the costs for communication, not the costs for protesting in distant places (Van Laer and Van Aelst 2010, 1161).

While the observation of diminishing transaction costs is in itself convincing, it helps to explain only some forms of internet-based and internet-enabled activism. Low transaction costs promote, for example, mass participation in online petitions and similar forms of 'clicktivism' that reach a very broad audience and require only minimal individual investments in terms of time and resources.

The Internet Solves the (Rational Choice) Problem of Collective Action

A second line of arguments is built around the claim that the internet would solve the collective action problem as it was formulated in the classical works of Mancur Olson (Olson 1971). Starting from the standard rational choice assumption of utility-maximizing individuals, Olson argues that individual participation in collective action would be unlikely as long as the collective action is aimed at generating collective goods. Collective goods are all nonexcludable goods, meaning that individuals cannot be excluded from using them. They can either be common goods if individual use is depleting them (i.e., they are rivalrous), or they can be public goods if one individual's use does not impair everybody else's use of the good (i.e., they are nonrivalrous). In any case, their nonexcludability means that instead of helping to produce the good, each individual can as well decide to free-ride on other persons' efforts, an option that is, from a utility-maximizing perspective, always more attractive because it allows for the enjoyment of the benefits without paying the costs. Since many goods aspired by social movements are collective goods, this problem should be especially virulent for them.

Lance Bennett and Alexandra Segerberg start exactly from this assumption when they argue that 'digitally networked action' would do away with the problems of collective action because it follows a different logic of 'connective action' (Bennett and Segerberg 2012, 743). In their words, the logic of collective action is riddled with the 'organizational dilemma of getting individuals to overcome resistance to joining actions where personal participation costs may outweigh marginal gains' (Bennett and Segerberg 2012, 748). The internet, or more precisely internet-based personal communication technologies, now offers a new option for collective action centred on the personal transmission and sharing of political information. Bennett and Segerberg argue that this 'connective action' is based on weak tie networks, does not require strong organizational control or the construction of collective identities, but is nevertheless able to react effectively to given opportunities (Bennett and Segerberg 2012, 750).

Bennett and Segerberg thus offer a 'solution' for the classical collective action problem not by providing a new mechanism for selective incentives (which was Olson's solution) but by offering a new logic of connective action built around digital media as organizing agents that supplements and possibly substitutes the logic of collective action.

This optimistic vision is countered by Evgeny Morozov's pessimistic judgement of online activism as 'slacktivism' (Morozov 2011, 220). He argues that the availability of tools for online activism might actually distract activists from those forms of engagement that are needed to achieve signifi-

cant political change or even overthrow oppressive regimes: activism that embraces the risk of being arrested, intimidated and tortured (Morozov 2011, 218). For him, connective action is less a promise than a threat to conventional activism, because it would create the false illusion of meaningful engagement while actually restricting activism to mostly low-risk and symbolic forms of engagement.

But even if Morozov's pessimistic evaluation of the new social media tools' negative consequences for social movements and protest may be a bit overblown, Bennett's optimistic evaluation suffers from a problem similar to the transaction costs perspective. Since Olson first formulated his collective action problem in the 1960s, a large body of research has accumulated showing that Olson's claim rests on a very narrow assumption, namely that individual participation in collective action should meaningfully be conceptualized as a rational choice cost-benefit-calculation.

A simple empirical observation shows that in contemporary societies there is usually neither a lack of protest and social movements nor of collective action in general. The reason for this is, that collective action and especially participation in protests and social movements is motivated by many things and individual cost-benefit-calculations are only one element among others. Olson's *homo economicus* model is thus not well suited to explain collective action or its obstacles. Consequently social movement research has largely abandoned a pure resource mobilization approach (McCarthy and Zald 1977) that rests on similar epistemological assumptions.

But if the emergence and development of social movements depends on (among others) the availability of resources, of political and discursive opportunities, on successful framing strategies, and the creation of collective identities, then the easily created weak-tie networks of connected action are at most one factor and probably not the most important to facilitate protest and other forms of contentious politics. It thus makes more sense to interpret connective action as one additional element in the repertoires of collective action social movements can draw on, an element that will not replace forms of engagement which require more commitment and sometimes even the risk of bodily harm and incarceration.

The Internet Corresponds to the Conflicts of the Network Society

A more theoretical perspective that is not claiming that the internet or social media would offer a solution to collective action problems can be found in the writings of Manuel Castells (2009, 2012) and his former student Jeffrey Juris (2005, 2014), who argue that the networking logic of current social movements, and especially of the Global Justice Movement, correspond to the more general assertion of networking logics in network societies.

Juris argues that in the global justice movement ‘networks as computer-supported infrastructure (technology), networks as organizational structure (form), and networks as political model (norm)’ (Juris 2008, 11) are combined in new cultural practices of the digital age developed in the movement. The internet’s reticulate structure would correspond to the organizational networks of the movement and also structure the activists’ ideals of cooperation and social coordination. Whereas the claims that the internet would solve the problem of transaction costs and of collective action are mainly based on a notion of superior effectiveness of internet-based communication and social media tools, Juris’s idea of a cultural logic of networking locates the importance of the internet for social movements on a different level. Here, the focus lies not so much on the technical efficiency but rather on the promise of nonhierarchical social collaboration.

Castells picks up this idea of a cultural logic of networking and integrates it into his theory of the network society, in which the internet represents one instance of a networking logic that replaces the centralized and hierarchical command-and-control logic of the industrial society (Castells 2000, 2009). The emergence of the internet is thus embedded in more far-reaching social transformations. Mobile phones and the internet, or more general modern networked communication infrastructures, are for Castells not only more or less new technologies but technological developments that correspond to more general social changes associated with the emergence of the network society. A similar thought has been developed by Bennett and Segerberg when they argue that today’s flexible social weak-tie networks represent a ‘shift from group-based to individualized societies’ (Bennett and Segerberg 2012, 744).

The internet as a communication infrastructure becomes so important, because in Castells’ perspective communication is at the centre of protest mobilizations and social movements ‘are formed by communicating messages of rage and hope’ (Castells 2009, 301). As a consequence, changes in the communication environment alter social movements’ chances to reach an audience and mobilize for protest. He points especially to the strong parallels between the viral logic of social media and the mobilization processes in what he calls ‘networked social movements’, and in a more far-reaching interpretation, he argues that the internet and networked social movements ‘share a specific culture, the culture of autonomy, the fundamental cultural matrix of contemporary societies’ (Castells 2012, 230).

To some extent, Castells oscillates between his almost dystopian depiction of the network society as undermining democratic processes and structured by powerful economic actors—a perspective that reminds us that unequal power relations do not vanish with the demise of hierarchical command-and-control systems as the dominant model for social and economic relations—and his very optimistic interpretation of networked social move-

ments as utopian attempts to reprogramme the network and to ‘regain autonomy of the subject vis-à-vis the institutions of society’ (Castells 2012, 228).

The important contribution of Juris and Castells is their insistence that the networking logic is more important than the concrete technical tools that are used and which enable networked communication and collaboration. But whether the networked structure of current ‘networked’ social movements differentiates them from earlier social movements is at least disputable. In the literature on social movements, a relatively long tradition exists arguing that social movements in general—and not just current movements that rely strongly on the internet—should be interpreted as networks (Diani 1992, 13; Rucht 1994, 76–77), and not as special forms of organizations (e.g., McAdam 1982, 25) or as relatively unstructured phenomena of collective behaviour (e.g., Blumer 1949, 199). This doesn’t contradict the importance of networking logics for social movements but questions that it would be something new and specific to the networked social movements of the network society.

The Internet Enables New Forms of Protest/Organizing

A weaker version of the networking logic is contained in claim that the internet would enable new forms of protest and protest organization. The most prominent idea in this respect is that the internet and/or digital communication technologies would enable leaderless movements. This claim comes in two flavors. The first is what I call the weak-tie version. Its core argument is that new technologies enable multiple and flexible direct connections between (potential) activists. Instead of creating connections through strong organizational ties, they are now directly connected in decentralized weak-tie networks. This makes organizations and leadership superfluous, or at least much less important than before. Bennett calls these weak-tie based mobilizations ‘permanent campaigns’ (Bennett 2003, 150), sustained by the networking and mobilizing capabilities of digital communication technologies. Howard and Hussain argue that the uprising in Egypt that toppled the Mubarak regime was such an instance of leaderless mobilization (Howard and Hussain 2013, 32).

The second, strong-tie version is put forward by Juris when he argues that the internet enabled the activists of the Global Justice Movement to build alternative, nonhierarchical networks with a strong focus on grassroots democracy. The activists use digital communication networks to build horizontal ties between autonomous elements, to facilitate the free circulation of information, and to collaborate in decentralized consensus-based decision making (Juris 2008, 11). But the links between activists that are created in these networks are not weak ties between otherwise unconnected individuals and existing only for short periods. Instead, Juris shows in his anthropological field study within the Global Justice Movement that activists still estab-

lish strong interpersonal links and friendships, that digital communication creates only one layer in a multiplex network connecting the activists and that these different layers are connected. This view is strongly supported by Gerbaudo's research in which he highlights the interconnectedness of online and offline protests and reports activists' claims that their 'Facebook friends' were actually also real friends and thus did not represent only weak ties (Gerbaudo 2012, 146).

Both notions of technology-enabled leaderlessness have been criticized from three perspectives. The first (e.g., Leach 2013) argues that the movements' attempts to create structures without stable and formal hierarchies are not particularly new but have been practiced with more or less success in various social movements at least since the 1980s. Relating leaderless structures and horizontal communication to the internet, to social media or more generally to digital communication tools would thus exaggerate the role of technology.

The second line of criticism does not deny that social media would be effective to coordinate huge weak-tie networks in leaderless protest activities. But it claims—similar to Morozov's criticism of slacktivism—that these forms of activism should not be uncritically applauded and instead seen as weaker and more ephemeral forms of protest. As a result, Geert Lovink argues—or actually rather demands—that 'strong organizational forms, firmly rooted in real life and capable of mobilizing (financial) resources, will eventually overrule weak online commitments (I "like" your insurrection)' (Lovink 2012, 170).

A third line of criticism argues that the communication and cooperation structures which can be observed in current social movements are actually less leaderless and horizontal than asserted in the literature. This position is put forward by Paolo Gerbaudo, who argues that the practices of current movements (his research is based on the Egyptian uprising, the Spanish indignados and Occupy) 'are ridden with a deep contradiction between the discourse of leaderlessness and horizontality and organizational practices in which leadership continues to exist, though in a dialogical or interactive form' (Gerbaudo 2012, 157). Instead of leaderless movements, he observes new forms of leadership based on differential use of social media tools and linked to the still important 'street-level leadership' structures in current social movements. Gerbaudo does not deny that social media play an important role and even structure the practices of current social movements. But he sees their role as one element in a more complex 'choreography of assembly' (Gerbaudo 2012, 11) in which the construction of virtual public spaces interacts with the appropriation of physical public spaces. This echoes to some extent Dieter Rucht's earlier claim that the internet would not replace but complement established media practices of social movements (Rucht 2004). Social media are well suited to reach sympathizers and activists. But social

movements usually can only be successful if they reach and get support from a broader audience. And this general public still can only be reached reliably through mass media. Internet and social media tools can thus only complement and not replace other media strategies.

In sum, this discussion of the four most prominent claims about the relation of the internet and social media on the one hand, and protest and social movements on the other, offers a rather ambivalent picture. Overall, the far-reaching claims about fundamental transformations of mobilizing structures and processes generally rest either on weak empirical grounds or they offer solutions for collective-action problems that do not exist or are not among the most pressing problems for current social movements. But even if the internet and social media have not changed everything for protest and social movements, they undeniably have altered the conditions and possibilities for protest mobilizations in numerous aspects. In the following section I therefore discuss the most interesting findings of the growing empirical research literature on internet and social media use in protests and social movements.

SOCIAL MEDIA USE IN CONTEMPORARY PROTESTS

Empirical studies about the use of social media and the internet in contemporary protests are generally based on two types of data sources: on the one hand, authors have directly analysed the content of digital media and the networks that are created between their users. On the other hand, digital media use has been investigated with more general research tools like surveys and (participant) observation.

In the first line of investigation, one way to analyse online activism is to assess the hyperlink structures that connect activist (and other) websites. Researchers quickly have started to collect this readily available information in order to identify important organizations and websites in various protest mobilizations. The results show that organizations which are important in the offline mobilization process (e.g., most visible in news reports about the protests) usually also show up as central and strongly connected nodes in the link networks (Van Aelst and Walgrave 2002; Badouard and Monnoyer-Smith 2013). Hyperlink networks thus seem to replicate relationships among organizations that also exist in the offline world. Some studies find more diversity in online compared to offline networks (Gillan 2009), but generally research points to strong signs of homophily in hyperlink networks, meaning that like-minded (Pilny and Shumate 2012) and/or geographically close (Vicari 2014) organizations are more strongly linked than ideologically or geographically diverse organizations. Unfortunately, only a few studies have systematically compared offline cooperation links and hyperlinks between organizations, but where this is done, strong correlations between both levels are found (Pilny and Shumate 2012, 276).

More recently, researchers have started to look at Twitter communication networks instead of hyperlink networks (Gerbaudo 2012; Conover et al. 2013; Howard and Hussain 2013; Tremayne 2014). Twitter networks constructed from shared hashtags or retweets are promising data sources because they potentially allow analysing connections not only between organizations but at the individual level, and analysing the content of Twitter messages can qualify the nature of the relationships. But Twitter data is also highly problematic because it is often impossible to say whether the originator of a tweet is actually an actively involved protester or only an interested commentator. Robert Brym and his collaborators show, for example, that in the Egyptian uprising in 2011 most tweets (nine out of ten) originated from outside Egypt (Brym et al. 2014, 270). One thing that the analyses of Twitter data consistently show is the highly skewed nature of social media use. Networks of several thousand nodes are usually dominated by a handful of highly connected nodes through which a large part of the information flows. This power law distribution (Gerbaudo 2012, 135) contradicts the notion of social media as tools for more egalitarian participation.

Research that builds on participant observation, surveys of protest participants and general-population polls complements and qualifies the findings of studies based on a direct analysis of internet and social media networks. Beyond explaining specific mobilization and protest dynamics, this research provides insights about at least four general aspects of the relation between internet/social media and social movements/protest: it highlights differences between social media tools, it enhances our understanding of the complex relation between online and offline protest, it points to new and emerging forms and repertoires of protest and it addresses the often problematic relationship between state and corporate interests and social movement use of social media tools, pointing especially to the aspect of censorship and surveillance.

While the more general claims about the effects of the internet and/or social media on social movements and protest often do not differentiate between different technological tools, empirical research on recent protests points to strong *differences between social media tools*: Brym and his collaborators, for example, show that in the Egyptian uprising Twitter has been used ‘more like a megaphone broadcasting information about the uprising to the outside world than an internal informational and organizing tool’ (Brym et al. 2014, 270). Instead of building networks among protesters, it thus has functioned as a partial replacement of traditional forms of alternative media, aimed at sympathizers, the general public and especially at journalists who then publish the information obtained via Twitter in traditional mass media. The movement activists’ differentiated view on Twitter and Facebook is supported by Gerbaudo’s study, who argues that in the activists’ practices Twitter has replaced mailing lists, while Facebook is seen as a modern equivalent to Indymedia (Gerbaudo 2012, 145).

The second aspect that many empirical analyses address is the complex *relation between offline and online activism*. Studies of all current protests, especially those of the Arab Spring, insist that these mobilizations relied heavily on preexisting strong social ties. The internet and social media played an important role because they were difficult to control and to censor, but neither for coordination among core activists nor for reaching and mobilizing a wider public did they function as primary coordination and information tools (Brym et al. 2014, 282). Preexisting offline social networks were central and indispensable for the core activists. And according to a survey among protesters on Cairo's Tahrir Square, nearly half (48.4 percent) of those interviewed 'reported that they had first heard about the Tahrir Square demonstrations through face-to-face communication' (Tufekci and Wilson 2012, 370), thus making direct personal contacts and foreign mass media the most important avenue to reach out to and mobilize sympathetic populations under conditions of a state-controlled and censored press. The specific contribution of social media could then be providing a tool to broker between different organizations and populations (Lim 2012, 244). And with regard to core activists, Stefaan Walgrave and his collaborators argue that digital communication tools enable them to connect their different activities and stay in touch with different organizations they belong to (Walgrave et al. 2011, 344).

Thus, instead of supporting Howard and Hussain's far-reaching claim that 'digital media has . . . become a necessary and sometimes sufficient cause of democratization' (2013, 39), many empirical studies of internet and social media use in current protests show that in order to understand protest and mobilization dynamics one has to look at the interaction between traditional mass media (and in oppressive regimes, especially foreign mass media), social media and other forms of digital communication and face-to-face communication. One of the most promising frameworks for understanding the specific structure of these interactions in repressive regimes has been developed based on an analysis of movements that were active long before digital communication tools were available for almost everyone. It is Karol Jakubowicz's study of the role of media in the social transition processes in Eastern Europe, in which he analyses the interaction between official mass media as propaganda tools, foreign mass media as sources for alternative views and moral support of local opposition and underground media as providers of alternative information and interpretation as well as connecting nodes in clandestine social networks (Jakubowicz 1995). To which extent the availability of digital communication tools has changed this relationship has still not been systematically analysed, but research on the Arab Spring suggests that social media tend to replace the role underground media and to some extent also foreign mass media have played in the protests leading to the transformations in Eastern Europe.

A third general aspect to which empirical studies on current social movements and protest point is the emergence of new media practices as *new forms and repertoires of protest*. On the one hand, this means the emergence of new internet-specific protest forms like website hacking, email bombing, distributed denial of service (DDoS) attacks or virtual demonstrations in the form of website blackouts or coordinated banner campaigns. These internet-specific forms add to existing protest repertoires and complement established offline action forms (Van Laer and Van Aelst 2010, 1150), and are used to mutually enhance their visibility in the general public (Haunss 2013, 108). On the other hand, studies highlight especially the innovative use of video platforms like YouTube. While social movement activists have used videos in their mobilizations already for a long time, the ubiquitous availability of video-recording hardware in the form of mobile phones and the ease of distributing them via video-sharing websites like YouTube has profoundly changed the role videos can play in current protests. Zeynep Tufekci and Christopher Wilson report that ‘almost half (48.2 percent) the respondents [in their survey among protest participants at Kairo’s Tahrir Square] had produced and disseminated video or pictures from political protest in the streets’ (Tufekci and Wilson 2012, 373). This creates new possibilities to reach out to distant publics and adds a very emotional element to social movements’ mobilization tools.

Finally, some studies also address the issue of *censorship and surveillance*. While in the Arab Spring social media have been hailed as being outside state control and thus have enabled communication under conditions of severe state repression, some authors have pointed out that electronic communication comes with its own fallacies. Two problems have been noted, one concerning the contradictions between the commercial goals of the companies that run social media services and activists who use them for protest purposes, and another one that concerns the enhanced surveillance capabilities of states.

With regard to the first problem, William Lafi Youmans and Jillian York have shown how the uses of social media by protesters in Egypt clashed with corporate rules prohibiting anonymous use of Facebook and governing the deletion of ‘inappropriate’ content on YouTube (Youmans and York 2012). Concerning the second problem, Morozov has presented an account on how Iranian authorities have used information gathered on social media sites to prosecute activists of the failed ‘Green Revolution’ (Morozov 2011, 11). But it is not only repressive regimes in the Arab world but also democratic regimes like Germany that rely increasingly on digital communication data to persecute protesters (Dix 2012). Connecting the two aspects, Oliver Leistert has argued more generally that corporate interests in extensive data collection and their willingness to disclose this data to state agencies creates a serious risk for oppositional activists (Leistert 2013).

CONCLUSION

Overall, this critical review of the literature on the relationship between internet and social media on the one side and protest and social movements on the other highlights three aspects.

First, the internet and social media do not completely reconfigure the conditions and options for protest and social movements. This is mainly because, in most cases, protest remains place-based and still relies to a very important amount on preexisting and face-to-face social networks. Thus, upon closer inspection, the far-reaching assumptions from cyber-optimists and pessimists often lack sound empirical foundations. Social media neither solve existing collective action problems nor does their use by protesters indicate the emergence of new forms of protest specific to the network society. Cyber-optimists and pessimists alike tend to overestimate the importance of social media for current protests.

Second, empirical studies consistently show that current social movements have quickly adopted new internet and social media technologies and integrate them into their toolbox of more traditional communication and media practices. Research especially shows that core activists tend to be the most intense users of new digital communication technologies for protest and political information purposes, whereas more distant sympathizers and on-lookers still rely for their political information mainly on traditional mass media and—especially in repressive regimes—on face-to-face social networks. How exactly internet technologies and social media interact with traditional media and communication technologies and with direct forms of personal interaction is still underresearched. The general pattern is clearly additive—new technologies and communication practices do not replace older ones, they rather complement them and are used alongside established repertoires. But few studies (e.g., Gerbaudo 2012) have really systematically tried to investigate how they add up.

Finally, several issues emerge which have not or only very superficially been addressed, but which are important for understanding the relationship between social media and protest. One such issue is the existence of differences between movements with regard to the use of internet and social media. Research generally focuses on movements in which internet and social media play a prominent role, and often also on movements which have only recently emerged. Whether or not the findings for these movements represent a more general pattern can only be said on the basis of more comparative studies looking on a broader population of movements. Related to this is a lack of knowledge about the changing role of specific digital communication technologies within one and/or across several movements. Research tends to focus on the newest technological developments and their adoption in current social movements and protest. But some technologies stay and social move-

ments continue to use them. Although with changing circumstances and with the emergence of new technologies, the use of existing tools (e.g., Indymedia, SMS, etc.) may change as well.

What is therefore needed to expand the knowledge about the function and use of social media and other digital communication technologies and to overcome the limits of existing research is more longitudinal and more comparative studies that go beyond the most recent and the most prominent uses of these technologies, as well as studies that pay closer attention to the interaction between states, corporations and protesters when it comes to the use of social media.

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