How Social Media is Changing Conflict

Thomas Zeitzoff*

June 2017

WORD COUNT: 8,667 words

Forthcoming in the *Journal of Conflict Resolution*

Abstract

Social media is increasingly playing a role in conflict and contentious politics. Politicians, leaders, insurgents, and protestors all have used it as a tool of communication. At the same time, scholars have turned to social media as a source of new data on conflict. I provide a framework for understanding social medias influence on conflict through four interrelated points. 1) Social media reduces the costs of communication. 2) It increases the speed and dissemination of information. 3) Scholars should focus on the strategic interaction and competitive adaption of both actors in response to communication technology changes. 4) The new data that social media provides is both an important resource, but also fundamentally changes the information available to conflict actors, thereby shaping the conflict itself. In sum, social medias influence on conflict defies simplistic explanations that argue that it privileges incumbents or challengers.

*School of Public Affairs, American University. zeitzoff@gmail.com

1 Putting Social Media in Perspective

In the summer of 2014 the Salafi-jihadist group known as ISIS swept into western Iraq from eastern Syria and captured the key Iraqi city of Mosul. Shortly thereafter ISIS declared a caliphate.[1] The subsequent rise of ISIS in war-torn Iraq and Syria is underscored by the group's ability to recruit nearly 30,000 foreign fighters from over 80 countries (Benmelech and Klor 2016). Western countries are particularly concerned about ISIS's slick use of propaganda and social media to recruit followers and inspire attacks in the West.[2]

Following anti-Russian and pro-Russian demonstrations throughout 2013 and 2014, and the ouster of Russian-allied Ukrainian President Viktor Yanukovych, Russian soldiers seized Crimea from Ukraine.[3] The eventual annexation of Crimea from Ukraine, and continued conflict in the Donbass region of eastern Ukraine has coincided with Russia's extensive use of misinformation, as well as cyber attacks against Ukraine to shape the Russian narrative.[4]

Finally, in November of 2016, in one of the most surprising election results in US history, businessman and political novice Donald Trump was elected President of the United States over former Secretary of State Hillary Clinton. Trump's rise was even more remarkable given his lack of solid support within the Republican Party establishment.[5] Trump credited his use of the social media platform, Twitter, with being a way that he could "fight back" against "unfair" stories, and that it helps "get the word out"to his supporters.[6] After the election, Trump has continued to use his Twitter feed to articulate his policies, as well as go after perceived rivals and enemies.

These three events—the rise of ISIS, the Russian occupation and annexation of Crimea, and the election of President Trump—are three of the most important geopolitical events of the 21st century. From ISIS's use of social media to target followers in the West and build their movement, to Russia's use of cyber warfare and misinformation, to Trump's harnessing of Twitter as a campaign tool, the use of social media has directly and indirectly played a prominent role in all three of them. The use of social media as part of such prominent events has led many scholars and policymakers to argue that social media matters (Howard 2010; Tufekci and Wilson 2012). Yet, the key unanswered question is how does social media influence conflict and contentious politics, and through what mechanisms is this happening?

Following others, I define social media as a form of electronic communication and networking sites that allows users to follow *and* share content (text, pictures, videos, etc.) and ideas within an online community (Trottier and Fuchs 2015). Prominent social media websites include Facebook, Twitter, SnapChat, Instagram, WhatsApp, and LinkedIn. Currently there are over 1.8 billion active Facebook users, and over 300 million active Twitter users.[7] This number is expected to grow as more than 50% of the world's population will gain access to the Internet (mainly through mobile devices), and the fast growth across Africa and the developing world.[8] Yet ordinary users are not the only ones who have signed on to social media in large numbers. Savvy politicians and leaders have also embraced social media. More than 75% of world leaders have active social media presence on Twitter or Facebook (Barberá and Zeitzoff 2017). Increasingly scholars are also using social media data to measure political polarization and ideology (Barberá 2015*a*), examine conflict dynamics (Zeitzoff 2011, 2017), describe protest and repression dynamics (Gohdes 2015; González-Bailón, Borge-Holthoefer, Rivero and Moreno 2011; King, Pan and Roberts 2016; Steinert-Threlkeld 2017), and describe foreign policy communities (Zeitzoff, Kelly and Lotan 2015).

One of the key innovations of social media (over traditional media outlets) is that it provides users the ability seek out information and share their own content within their own networks. Sophisticated algorithms allow people to follow and recommend content based on their previous behavior or interests and within their network (Tufekci 2015). This allows content to be targeted at, and customized for, relevant audiences, potentially increasing the power to persuade. Additionally, individuals do not simply passively follow or receive elite messages, but social media allows these ordinary citizens to respond in kind via hashtags[9] or directly interact with elites. Finally, the speed of communication on social media, with tweets and posts being nearly instantly shared around the world, has quickened the news information cycle, allows stories to "trend" and "go viral" much more quickly.[10] Yet, what does all this mean for conflict and contentious politics as more leaders and regular citizens embrace social media?

1.1 Communication Technology Development

The effects of new communication technology have never received their due respect from scholars of political violence. Most of the focus, somewhat understandably, has been on new weapons deployed on the battlefield (Van Creveld 2010). From the invention of the Gatling gun, to intercontinental ballistic missiles (ICBM), to drones–these technological breakthroughs have revolutionized the way states project and use force. New weapons technology directly affects the balance of power, provide deterrence, and can also be shown off in military parades. Scholars wishing to measure states power can count the number of ICBMs, or their supposed gap, and use this as a rough measure of technological parity.[11] In contrast, the effects of new communication technology are more indirect. Yet, the focus on weapons has also masked the important breakthroughs in communication technology and how they have altered the way in which leaders make war and respond to the masses, conduct diplomacy, and individuals organize for protests or rebellion.

The effects of new communication technology on conflict are more indirect. Specifically new technology influences the spread of information, which is crucial for leaders and those challenging the regime. For example, the advent of the printing press allowed Martin Luther and his followers to challenge the prominence of the Catholic Church[12]. The widespread circulation and resonance of Luther's critique of the Catholic Church via pamphlets set the stage for the Protestant Reformation, and the subsequent Thirty Years' Wars (1618-1648) that killed between 25-40% of Germany's population (Parker and Adams 1997).[13] Leaders have continually recognized the important of controlling communication technology. Vladimir Lenin and the Bolsheviks in 1917 viewed seizing telegraph, telephones, and railways as a key goal to cement their revolutionary gains (Pethybridge 1967).[14] Its not just insurgents and revolutionaries who have seen the importance of communication. Incumbent leaders and militaries have long recognized the importance of new communication technology. During the French Revolution, the invention of the optical telegraph was prompted by the French First Republic's need for quick and intelligence on a possible foreign intervention to reinstall the French monarchy.[15] During the US Civil War, telegraph cables from battlefield allowed President Lincoln the unprecedented ability to directly communicate with his generals, but also allowed more intense coverage of the war, and in particular battlefield casualty reports

by newspapers (Wheeler 2009). The development of mass radio and television media in the first half of the 20th century further played a pivotal role in key political events. Hitler and Goebbels used film and television, along with orchestrated, mass political rallies to solidify the support of the Nazi party (Rentschler 1996). Yet, mass media also had the capacity to puncture the veneer of invincibility of leaders. For instance the booing and jeering on television of iron-fisted Romanian autocratic leader Nicolae Ceauşescu accelerated the Romanian revolution of 1989.[16]

Communication technology advances do not happen in a vacuum. Rather they are highly correlated with advances in military technology, and changes in the economy more generally. Technological revolutions provide the impetus for advances in both weaponry and communication (Krepinevich 1994). The Industrial Revolution led to the large-scale manufacturing of armaments, including widespread adoption of rifled weapons. Industrial strength, particularly the ability to harness the dual power of steam and steel, became a key component of military strength, and also influenced the development on communications such as the the telegraph and the news media (Wawro 2002). In the interwar period (1918-1939) the increasing use of airpower and threat from naval attack, led to the development of the first radar systems.[17] This development of radar happend at the same time as the ascension of radio as a tool for mass communication. For example US President Franklin Roosevelt employed fireside chats to sell his domestic agenda and subsequent US advances during World War II (Roosevelt 1992). More recently, the increasing power of semiconductor and communications technology (Łukasiak and Jakubowski 2010) has laid the groundwork for sophisticated global positioning satellites (GPS), guided munitions, and drones.[18] These same advances in semiconductor technology also undergirded the advances in communication technology that facilitated increases in (personal) computing power, the development and expansion of the Internet, smart phones, and the development of social media.[19] Thus disentangling the effects of new communication and media technology from those of military technological advances, and more general technological advances is no easy feat.

Media and its role in conflict has typically been defined in two ways. The first type is elite-level communication that includes diplomacy, tactical communication by leaders, rebel groups, and military commanders to communicate about logistics and tactics, as well as to signal intentions with

allies and adversaries (Smith and Stam 2004). Arguments about conflict stemming from diplomatic intrigue (Tuchman 1962), particularly misperception (Jervis 1976), are built around the effects of such tactical communication.

Massed-based appeals are the other type of communication. These involve leaders and challengers seeking to coordinate mass behavior,[20] or inhibit it, by controlling the narrative and manipulating the mass channels of communication (De Mesquita and Downs 2005; Howard 2010). Whether it be tactical communication (elite to elite), or mass communication (elite to the masses), traditional communication models generally considered the masses passive receivers of elite communication (Scheufele 2000). Yet social media is upending this relationship (Dahlgren 2005). In addition to the speed and facilitation of communication amongst like-minded individuals, social media challenges the political and elite-dominated paradigm of media's effect on political behavior. Social media allows users to create their own content, and also directly respond to elites and leaders. Yet, how this new communication paradigm of greater speed and democratization influences conflict and contentious politics is still not well-understood. In the subsequent sections, I first describe how social media is changing popular mobilization dynamics including protests, recruitment to armed groups, and more general collective action. I then discuss how elites and and leaders are using social media to further their own goals. Drawing on previous research, I present a unified framework to understand how new communication technology can influence political conflict synthesizing elite and mass-level effects. Finally, I discuss how future technological advances and trends may change conflict dynamics, and the promises and pitfalls of the new data for conflict researchers.

2 Social Media and Popular Mobilization

Contentious politics is the use of disruptive tactics by groups and individuals (challengers and incumbents) to change or maintain the political status quo. Much of the focus of scholars has been on how groups challenge incumbents, both through protests and violent insurgent tactics, and how incumbents respond (Francisco 2005; McAdam, Tarrow and Tilly 2001). The central question in much of the contentious politics literature is how do challengers solve the collective action problem of getting people to turn out and protest, particularly in the face of threats from incumbents?

Most individuals do not want to be the lone protestor facing down tanks. Communication plays a central role for groups seeking to exchange information and expose wrongdoing by incumbents, and mobilize and coordinate protests (Shirky 2011). Some scholars argue that social media can help publicize perceived wrongs committed by the regime, through creating and help mobilize protestors. They view social media as a "liberation technology" (Diamond 2010). Given the ability of social media to more easily facilitate connections among activists, lower coordination and communication costs, get feedback on protest platforms, and raise funds, social media allows individuals to 'hack' protests.[21]

The disputed 2009 Iranian presidential elections provides an example. Marred by accusations of widespread fraud, supporters of the opposition candidate Mir-Hossein Mousavi took to the streets to demand the ouster of incumbent President Mahmoud Ahmadinejad. During the subsequent protests, Neda Agha-Soltan, a young activist, was assassinated by assailants with alleged links to the incumbent government. The assassination was captured on video and subsequently shared on YouTube and Twitter millions of times, generating widespread outrage.[22] The use of Twitter and other social media sources to coordinate the protests, and broadcast it to international audiences lead some commentators to dub it the "Twitter Revolution." However others questioned the primacy of social media in the protests (Aday et al. 2010). What is not disputed is that social media brought images directly broadcast by mainstream news media, further amplifying the international reach of the protests.[23] In the US in 2011 protests against economic inequality and corporate influence in politics began in Zuccotti Park in southern Manhattan. The loose affiliation of leftist groups protested against growing economic inequality and the perceived outsized role of money in politics, but later incorporated environmental and anti-War messages as its appeal spread internationally.[24] became known as Occupy Wall Street (Occupy Movement). While the movement was able to harness social media, in particular Twitter under the hashtag (#Occupy) to gain widespread media coverage, the Occupy movement was criticized for its lack of concrete goals and loose organization (Juris 2012).[25]

On the heels of the Occupy Movement, the Black Lives Matter (BLM) movement was galvanized

in 2014 via the use of social media to share video clips, experiences, and Facebook posts on police violence and excessive use of force against African Americans in the US. Following the shooting death of Michael Brown by Ferguson Police Officer Darren Wilson, and subsequent nationwide protests, the movement gained widespread prominence.[26] Scholars argue that the use of social media by BLM was successful in 1) providing context and voice to a marginalized population, 2) raising the salience of events in the mainstream media, and 3) finally (in contrast to the Occupy Movement), providing a concerte set of goals.[27]

Perhaps no recent social movement has had a greater influence on current geopolitics than the popular uprisings known as the Arab Spring.[28] They began with protests against the Ben Ali dictatorship in Tunisia in 2010 and quickly spread across the region. Images on Facebook, Twitter and other social media platforms of protestors in the street calling for revolution were transmitted quickly from the street to other countries, and global media sources (Aday, Farrell, Lynch, Sides and Freelon 2012). The protests directly led to the removal of leaders in Tunisia, Egypt, and played a role in the political conflicts in Iraq, Libya, and the Syrian Civil War. Steinert-Threlkeld (2017) uses social media data to show that the mobilization of activists on the periphery facilitated collective action to protest. A key question, is whether this peripheral mobilization and the protests more generally can be attributed to the use and spread of social media? Howard et al. (2011) and Aday et al. (2012) suggest that the direct effect of social media may be limited, and that its real effect on protest and mobilization may be its ability to raise the salience of protests with more traditional media outlets. Furthermore, Little (2016) argues that the effects of the increasing the ability of citizens to communicate (via social media) is less straightforward than the liberation technology story would suggest. Airing grievances against the regime can sometimes let challengers know that they have less support than than they thought, and has an ambiguous effect on protests (Little 2016, p. 153). Yet, in contrast, providing coordination and logistical information ("tactical coordination") increases the probability of protests.

While much of the focus on advances in information communication technology (ICT), including social media, has been on popular protests, insurgent groups have also embraced these technologies (Dafoe and Lyall 2015). Shapiro and Weidmann (2015) use cellphone connections in Iraq and find

that that increased cellphone activity actually reduced insurgent violence against coalition forces. They argue that this is due to increased reporting of insurgent improvised explosive devices (IED). Conversely Pierskalla and Hollenbach (2013) examine the effect of increasing cellphone coverage in Africa on political conflict, and they find that increased cellphone coverage led to increased violence. They argue that increased cellphone coverage lowered the cost of insurgent collective action. However, Weidmann (2016) has challenged their interpretation, and argues that increased cell phone coverage is correlated with increased newspaper coverage of violent events, not an actual increase in their volume.

The conventional explanation is that social media provides advantages to challengers over incumbents, and helps democracy flourish (Diamond and Plattner 2012; Milner 2006). Yet many have labeled this challenger advantage interpretation of social media as overly optimistic (Farrell 2012; Lynch 2011). Rød and Weidmann (2015) show that democracy is less likely to advance in countries with *higher* Internet penetration–thus calling into question the "liberation technology" framework. More skeptical critics have argued that while the Internet and social media provide challengers new tools, it also makes the government job at monitoring and disrupting collective action easier (Morozov 2012). Instead of having to follow individual activists, or seek to infiltrate them in person, social media and the Internet allows a more efficient means of monitoring them. It also allows leaders to know when and where protests are likely to be, and gives incubments a potential mechanism for shutting down these protests, and eliminating activists. For instance, King, Pan and Roberts (2013) show that Chinese censors allow dissent on micro-blogging platforms, but any talk of collective action is censored. The implication is that dictators and autocrats can be more selective and efficient with their use of censorship.

2.1 Ideology and Recruitment

An understudied issue with social media and political participation deals with the its effects on ideology and recruitment. Many policymakers and scholars have argued that the Internet and social media in particular, allows groups engaged in protests and violence to more easily target and recruit potential allies and activists. Activists are able to use social media networks to increase the likeli-

hood of political participation through persuasion and mobilization. For instance previous research has shown how networks effects of social media may induce political participation, from participation in the 2010 US midterm elections (Bond et al. 2012) to participation in the anti-austerity movement (*Indignados*) in Spain (González-Bailón, Borge-Holthoefer, Rivero and Moreno 2011). Within the context of political violence, the effect of social media on ideology and recruitment has mostly been explored within the context of radicalization to Salafi-jihadist groups (Mendelsohn 2011; Weggemans, Bakker and Grol 2014), and to a lesser extent far right groups (Gerstenfeld, Grant and Chiang 2003). For instance, many argue that the Internet and social media lowers the barriers for radical and extremist content to be accessed (Sageman 2008). It also allows terrorists and insurgent groups a broader platform to publicize grievances from counter-terror and counterinsurgent operations (Bueno de Mesquita and Dickson 2007; Rosendorff and Sandler 2004). Rather than having to subscribe to a sketchy newspaper, or meet in a somebody's basement, individuals can come into contact with radical content in the privacy of their own home (Neiwert 1999; Simi and Futrell 2015).[29]

Social media further allows individuals to seek out a like-minded group or peers to bounce ideas off each other and build solidarity. The ability for individuals to more easily select their information sources and segment into populations, has been lamented more generally in politics, with some arguing that it is a direct cause of polarization (Bennett and Iyengar 2008). Thus social media provides cheaper and more accessible pathways to radicalization (Horgan 2008). Others suggest that the effects of online polarization are somewhat exaggerated (Boxell, Gentzkow and Shapiro 2017), or may in fact reduce polarization (Barberá 2015*b*).

While there have been several in-depth case studies that have suggested how individuals may be self-radicalized and seek out extremist groups, or be radicalized online, most of them have been case studies focused on ISIS.[30] Yet a similar dynamic is observed in the spate of knife attacks by Palestinians against Jewish Israelis in 2015-2016 (also known as the 'Stabbing Intifadah'). In contrast to previous Palestinian uprisings, the Palestinian attackers were younger, had loose to non-existant political connections, and appeared to be radicalized or inspired by videos posted on Facebook and other social media platforms.[31] This dynamic is of particular concern, as individuals are able to

radicalize themselves and then carry out so-called lone-wolf attacks, which are particularly hard to detect by security services (Spaaij and Hamm 2015). While the question of whether lone wolves truly act alone, or have external guidance, the concept of purely online, or self-radicalization is tricky to define.[32] The implicit argument is that "if not for the Internet/Facebook, Twitter, etc.," the following person would not have been radicalized. Yet, more systematic empirical work on the process of radicalization, paying careful attention to the role of counterfactuals. Promising research by Mitts (2017) uses Twitter data to show that local-level anti-Muslim hostility in the West increases support for ISIS among vulnerable users, and leads them to talk more about foreign fighters, and express greater anti-West sentiment.

In sum, the current literature provides strong evidence that social media can raise the salience of protests and the ease with which groups can get their 'story' out, yet its effects on facilitating challenger coordination, or advantaging incumbents is more mixed. More systematic research on how social media may be facilitating recruitment and ideological radicalization is needed. For instance, what type of groups select into using social media as a principal means of recruitment, i.e. non-violent versus violent movements? When is social media primarily used for connecting activists (networking), or ideological radicalization, or some combination of the two? The answers to these questions are crucial for both scholars and policymakers.

3 Elite Usage and Manipulation of Social Media

While much of the focus of the effects of social media has been on popular mobilization, elites and movement leaders have been using social media as a strategic communication venue. For instance during the Syrian Civil War, rebel groups have used social media to actively recruit individuals[33] as well as solicit financial donations.[34] Several enterprising rebel groups even put together fundraising pages on Twitter and Facebook where they bragged about their military strikes as a way to increase donations.[35] ISIS and other Salafi-jihadist groups have used social media a a platform to facilitate recruits seeking to travel to Syria, providing tips on the best way to cross into Syria, how to stage attacks, and how best to hide communication practices from law enforcements.[36]

Non-violent social movements have also used social media as a recruiting platform. For instance,

the Women's March on January 21, 2017 that protested against US President Trump were some of the largest protests in US history with an estimated 3.2-5.2 million attendees.[37] The march organizers used social media to spread the word about the protests, and also to collect attendees email addresses to facilitate recruitment to follow-up political activity, and identify new women to run for political office.[38] Increasingly protestors, politicians and leaders are using large databases, Facebook advertising, and other metrics to identify financial supporters and voters (Hersh 2015). Yet, some critics argue that protests that make extensive use of social media encourage low-costs participation such as sharing posts on Facebook, or retweeting and "liking" the content, instead of substantive political behavior. This kind of participation is known as"slacktivism",[39] or in keyboard jihadis.[40] Yet, other research suggests that such gateway participation further facilitates recruitment and participation (Christensen 2011; Kristofferson, White and Peloza 2014).

Actors engaged in conflict do not simply use social media as a way to mobilize supporters, but they also use it to actively shape the narrative about their group. For instance, some consider the 2012 Gaza Conflict the first "Twitter war" (Zeitzoff, Kelly and Lotan 2015). Israel announced the beginning of the conflict with a tweet from its official IDF Spokesperson Twitter feed that contained a picture of a high-level Hamas operative overlaid with a red stamp that said "eliminated." Throughout the course of the conflict Hamas and Israel exchanged bombs and rockets, as well as tweets. Each side used it's Twitter feed to shape and influence their version of the action, and denigrate the opposing side. Since the tweets were largely in English, they were mainly aimed at rallying support from international audiences, and shaping journalistic coverage.[41] What is particularly important is the fact that Hamas was able to compete with Israel's much larger budget.[42]

The use of social media as a tool to rally audiences during conflict is not isolated to the Israeli-Palestinian conflict. During the 2011 Libyan Civil War rebel groups used social media strategically as part of their diplomatic efforts to draw international support and recognition (Jones and Mattiacci 2017). Protest movements have also used social media to build bridges across movements in geography. For instance the relationship between Black Lives Matter, Dakota Access Pipeline protests, and other anti-establishment movements have all offered support and awareness for each

others' causes via social media.[43]

The most important, and overlooked development may be the increasing use and manipulation of social media by world leaders. Over 75% of world leaders have an active Twitter or Facebook account (Barberá and Zeitzoff 2017). Leaders and governments are using social media to campaign and rally support for their issues both domestically and internationally, and also as a tool to both shape and bypass traditional media. Perhaps no leader is more defined by the medium, than President Trump. Both as a candidate, and then as president, Trump used Twitter to rally his followers, and set the domestic and international agenda with his provocative tweets. He used Twitter to attract mainstream media attention to policies, and explain his position to his followers.[44]

Leaders and governments are not simply using social media to take policy positions, but actively manipulating it. For instance, both Syria under President Bashar al-Assad[45] and Vladimir Putin's Russia[46] have used fake accounts, trolls, and bots to manipulate opinion and crowd out critical views. China employs paid commenters, or members of the so-called "50 Cent Army,"[47] to crowd out critical commentary, and provide distraction on Chinese microblogs (King, Pan and Roberts 2016). Other times, governments selectively engage in censorship. For instance, in response to challenges to the incumbent AK Party, including the 2013 Gezi Park protests and 2016 coup attempt, the Turkish government has periodically blocked Twitter, WhatsApp, and Facebook, by throttling access to sites such that they become inoperable.[48] In other cases, such as President Hosni Mubarak in Egypt, leaders have fully blocked the Internet to try to stem unrest and protests, albeit in the Egyptian case it may have in fact backfired and facilitated future protests (Hassanpour 2014). In extreme cases, leaders, such as Syrian President's Assad, may use Internet blackouts to block reporting of government facilitated atrocities (Gohdes 2015).

Table 1 provides an overview of various elite and mass-level usage of social media discussed previously. For each example it describes the level of analysis (elite, mass, or both), various relevant theories of conflict, along with testable research questions.

Example	*Brief Description*	*Level of Analysis*	*Relevant Conflict Theories*	*Testable Research Questions*
Social media during the Arab Spring (Steinert-Threlkeld 2017)	Many protestors and activists (both in the region and abroad) used social media (mainly Twitter and Facebook) to promote the protests.	Mass-level.	Protest dynamics; Popular Mobilization.	Does social media access increase the propensity to protest?
Use of social media by ISIS (Berger and Morgan 2015; Mitts 2017)	ISIS-affiliated groups have used Twitter, WhatsApp and other network apps to raise the groups profile, recruit foreign followers, and plan attacks from abroad.	Elite- and Mass-level.	Radicalization; Terrorism Tactics; Principal-Agent Dynamics.	What factors influence terrorist groups' decisions to recruit individuals via social media versus in person? How does recruitment method (online vs. offline) influence the type of recruit?
2012 Gaza Conflict "Twitter War" (Zeitzoff, Kelly and Lotan 2015)	In November of 2012 Israel and Hamas backed-militants fought an 8-day war, characterized by both militaries using social media, and in particular Twitter, to justify their actions and denigrate the other side.	Elite- and Mass-level.	Audience Cost Theories; Effect of International Mediation; Public Opinion and War.	Does international support or opposition on social media constrain or embolden democracies during war?
President Trump's use of Twitter (Barberá and Zeitzoff 2017)	During the 2016 US Presidential election, and following the election, President Trump has used Twitter to bypass the traditional media, announce and sell his policies, and denigrate his opponents.	Elite-level.	Audience Cost Theories; Bargaining Models; Leader Behavior.	When do leaders emphasize domestic versus foreign policy on social media? How does public support for the leader influence this behavior?
China's use of 50 Cent Army (King, Pan and Roberts 2016)	China employs a large cadre of paid Internet commenters on micro-blog website to set the agenda.	Elite- and Mass-level.	Autocratic Behavior; Preference Falsification.	Does the use of "paid commenters" reduce general societal trust? What are its effects on actual protest mobilization?

Table 1: Use of Social Media During Conflict and Implication

4 A Theoretical Framework for New Communication Technology and Conflict

Given all the disparate theories and findings on social media and contentious politics, it is useful to provide a framework to organize how scholars can conceptualize social media's influence on conflict. These four crucial points provide a way that scholars can harness and think critically about social media's effects.

First, social media lowers the barriers to entry for individuals and groups seeking to communicate. The use of blogs, Facebook, or Twitter to disseminate information also allows groups engaged in violence, or seeking to challenge the state an alternative to mainstream media. Thus the power of incumbents to control media may be lessened. Yet, this does not mean that social media acts as simply an alternative to the mainstream media. Many traditional media outlets are shaped and influenced by blogs and influential users. Especially during conflicts or contentious events, challengers are able to get their side of the story out to the public by seeding it in blogs and social media that are then picked up by mainstream domestic and international media. Thus it is not that social media is an alternative to mainstream media, rather its effects are indirect via its influence on media gatekeepers. This mechanism is particularly relevant to protestors and challengers in autocratic regimes, where social media provides an alternative outlet to closed off media outlets. Alternatively, social media also affords regimes to fund "astroturfing," or sockpuppets that can give the appearance that the regime has broad-based support, and also drown out alternative voices.

Second, social media increases the speed and spread of information. Information tweeted out or blogged can instantaneously be streamed across the globe, and go "viral"when it is picked up by mainstream news sources. This quickening of the news cycle has several implications. Competition between various news outlets to be the first to report stories, can create incentives to not fully vet information.[49] Actors thus may have the ability to provide false and misleading information favorable to their side that may not be fully-vetted. The speed of information, also makes actions that may be been more easily done behind proverbial closed doors, or mass atrocities more likely to come to light more quickly.

Third, rather than focusing on whether incumbents or challengers are advantaged by social media, what is perhaps more important is the strategic interaction and constant adaptation of both sides shift communication technology and tactics. For instance, leaders in autocracies have used social media to mobilize their own supporters, frame their own propaganda, measure how popular they are, and shore up elite support (Gunitsky 2015). The Chinese government has taken a different tactic, using its 50 Cent Army to flood micro blogs and drown out criticisms (King, Pan and Roberts 2016). But activists also constantly seek to adapt to incumbent crackdowns. During the 2014 Hong Kong protests, protestors used Bluetooth messaging apps that only radiated within a limited geographic areas to avoid government monitoring.[50] Other groups from dissidents to ISIS sympathizers have moved from Twitter and open networks, to encrypted apps such as WhatsApp and Telegram.[51]

Finally, social media generates new data and information. A central question for groups engaged in conflict, those wishing to protest, or leaders about to consider a new policy is how much support do they actually have? Social media can provide this crucial information. I.e., how popular is a particular Tweet, how many times does a particular post get shared, how many pageviews, or how many followers does a particular account have? Yet this new data does not simply provide challengers and incumbents with new information–popularity, support, but the provision of this information fundamentally alters the strategic environment. For instance the ability of Israel to directly monitor its support during the 2012 Gaza Conflict, and look at shifts in support (mentions of the hashtag #GazaUnderAttack compared to #IsraelUnderFire), alters their calculus (Zeitzoff 2017). The ability to gauge how popular particular actions are is important in the context of conflict, and for leaders more generally.

Popular support for challenger organizations (from protest groups to terrorist groups) also exhibit a similar competitive dynamic. Groups use social media to gauge support and recruit followers. Yet, governments also monitor social media for news of protests, or presence of radicalization of for signs of future attacks. When groups use social media to to galvanize protestors, or recruit individuals join a membership in terrorist group, they also provide governments an opportunity to monitor and target them. This dilemma is even more acute with groups that have an adversarial

relationship with the state and need to maintain secrecy (Shapiro 2013).

The main takeaways for scholars seeking to understand social media are as follows. First, trying to understand social media without considering the underlying media dynamics and incentives is problematic. Second, focusing on whether or not social media favors activists or governments misses the crucial fact this relationship is not static, but is dynamic and adaptive. A more fruitful strategy is to focus on the strategic interaction and adaptation of new tactics by both sides. Finally, while social media provides unprecedented data and the potential for new and exciting insights, scholars of conflict cannot treat the data as an unlimited, representative firehose. The data itself is part of the strategic conflict environment, and understanding that process is central to harnessing social media. Table 2 summarizes this organizational framework for understanding communication and conflict. .

Communication Effects	*Implication for Conflict and Media*
Lowered barriers to communication	Technological advances diversify sources of information, allowing new opportunities to shape mainstream media. But the effect on the overall information environment is ambiguous, and likely to depend on regime type.
Increased speed of information	Incentives for stories to go viral, and news outlets to be "first", increases the susceptibility to misinformation.
Strategic dynamics and adaptation	Constant adaptation between leaders and challengers to the regime. Focus of researchers should be on dynamics, rather than whether leaders or protestors are privileged by new technology.
New data and information	Social media data is not just a boon for researchers. Leaders, insurgent groups, protestors, etc. all have the ability to gauge support for various policies and actions on social media, and this ability alters subsequent conflict dynamics.

Table 2: Effects and Implications of Communication Technology on Conflict

5 Towards a Future Research Paradigm

What does the future of social media and conflict look like? Several recent developments suggest that it may evolve in important ways. First, social media will increasingly become a tool for campaigning. Leaders and groups will use more sophisticated data analytics and tactics to better target potential supporters and messengers. Second, given concerns of users with Facebook and Twitter over privacy and data usage,[52] groups are likely to increase their usage of encrypted social media and segmented networks. This may make their actions harder to track and monitor. Third, the use of social media and conflict will also be increasingly tied to cyber conflict more generally. From the use of sock puppets, to selective leaking of online materials, actors will increasingly coordinate social media with aggressive cyber actions. For instance, many have argued that the leaks of the Democratic National Committee (DNC) hacked emails by WikiLeaks was synchronized with online pro-Trump Twitter bots to amplify the messages, and to provide maximum impact against the candidacy of Hillary Clinton.[53] Thus scholars should further seek to marry cyber conflict strategies with social media data (Gartzke 2013; Singer and Friedman 2014). Fourth, artificial intelligence and more sophisticated algorithms are also likely to further influence the ability to detect and manipulate conflict and social media.[54] The effect of this increasing reliance on automated detection and defense on conflict are likely to be less predictable, and potentially non-linear.

The following four research questions can serve as roadmap for scholars trying to understand social media's effects on conflict and political violence. First, scholars should focus on understanding how groups use social media to recruit and shape potential follower's ideology. Which kinds of platforms, appeals, or messaging tactics are most successful and persuasive? Second, how do elites and world leaders use social media? Which platforms and messages do they use to mobilize the followers, and what tactics do they use to quash dissent? Furthermore, how do elites and leaders use social media to communicate with other leaders and elites? Third, social media and communication technology advances do not happen in isolation. Rather they influence the strategic interaction of actors in highly dynamic settings, i.e., protest-repression, civil war, etc. Understanding the dynamic effects of social media is important. Finally, while the previous three areas focused on the direct

effects of communication technology advances, the indirect effects of such technology advances may be just as important. For instance, social media platforms lower the barriers to communication. Does this lowered barrier of entry, increase partisan and ethnic polarization? Does it reduce trust in the mainstream media in democracies, but allow alternative information to flow in autocracies? All of these are important, potential indirect effects.

Finally, it is important for scholars to keep in mind that any further advances in social media technology are likely to correlate with other changes in military technology, and economic activity more generally. Trying to disentangle the effects of new communication technology from other broader technological and economic changes in presents scholars with new data, but also tricky inference problems. Avoiding sweeping generalizations such as "new technology gives Actor X an (dis)advantage," and instead considering the full strategic implications of these new technologies will be key to understanding the influence of social media on conflict going forward.

References

Aday, Sean, Henry Farrell, Marc Lynch, John Sides and Deen Freelon. 2012. "New media and conflict after the Arab Spring." *United States Institute of Peace* 80.

Aday, Sean, Henry Farrell, Marc Lynch, John Sides, John Kelly and Ethan Zuckerman. 2010. "Blogs and bullets: New media in contentious politics." *United States Institute of Peace* pp. 1–31.

Barberá, Pablo. 2015*a*. "Birds of the same feather tweet together: Bayesian ideal point estimation using Twitter data." *Political Analysis* 23(1):76–91.

Barberá, Pablo. 2015*b*. "How social media reduces mass political polarization. Evidence from Germany, Spain, and the US." *Presented at the 2015 American Political Science Association Conference* .

Barberá, Pablo and Thomas Zeitzoff. 2017. "The New Public Address System: Why Do World Leaders Adopt Social Media?" *International Studies Quarterly* Forthcoming.

Benmelech, Efraim and Esteban F Klor. 2016. "What Explains the Flow of Foreign Fighters to ISIS?" *National Bureau of Economic Research (NBER) Working Paper* .

Bennett, W Lance and Shanto Iyengar. 2008. "A new era of minimal effects? The changing foundations of political communication." *Journal of Communication* 58(4):707–731.

Berger, Jonathon M and Jonathon Morgan. 2015. "The ISIS Twitter Census: Defining and describing the population of ISIS supporters on Twitter." *The Brookings Project on US Relations with the Islamic World* 3(20).

Bond, Robert M, Christopher J Fariss, Jason J Jones, Adam DI Kramer, Cameron Marlow, Jaime E Settle and James H Fowler. 2012. "A 61-million-person experiment in social influence and political mobilization." *Nature* 489(7415):295–298.

Boxell, Levi, Matthew Gentzkow and Jesse M Shapiro. 2017. "Is the internet causing political polarization? Evidence from demographics." *National Bureau of Economic Research (NBER) Working Paper* .

Bueno de Mesquita, Ethan and Eric S Dickson. 2007. "The propaganda of the deed: Terrorism, counterterrorism, and mobilization." *American Journal of Political Science* 51(2):364–381.

Christensen, Henrik Serup. 2011. "Political activities on the Internet: Slacktivism or political participation by other means?" *First Monday* 16(2).

Dafoe, Allan and Jason Lyall. 2015. "From cell phones to conflict? Reflections on the emerging ICT–political conflict research agenda." *Journal of Peace Research* 52(3):401–413.

Dahlgren, Peter. 2005. "The Internet, public spheres, and political communication: Dispersion and deliberation." *Political communication* 22(2):147–162.

De Mesquita, Bruce Bueno and George W Downs. 2005. "Development and democracy." *Foreign Affairs* pp. 77–86.

Diamond, Larry. 2010. "Liberation technology." *Journal of Democracy* 21(3):69–83.

Diamond, Larry and Marc F Plattner. 2012. *Liberation technology: Social media and the struggle for democracy.* JHU Press.

Farrell, Henry. 2012. "The consequences of the internet for politics." *Annual review of political science* 15:35–52.

Francisco, Ronald A. 2005. "The dictators dilemma." *Repression and mobilization* pp. 58–81.

Gartzke, Erik. 2013. "The myth of cyberwar: bringing war in cyberspace back down to earth." *International Security* 38(2):41–73.

Gerstenfeld, Phyllis B, Diana R Grant and Chau-Pu Chiang. 2003. "Hate online: A content analysis of extremist Internet sites." *Analyses of social issues and public policy* 3(1):29–44.

Gohdes, Anita R. 2015. "Pulling the plug: Network disruptions and violence in civil conflict." *Journal of Peace Research* 52(3):352–367.

González-Bailón, Sandra, Javier Borge-Holthoefer, Alejandro Rivero and Yamir Moreno. 2011. "The dynamics of protest recruitment through an online network." *Scientific reports* 1.

Gunitsky, Seva. 2015. "Corrupting the cyber-commons: Social media as a tool of autocratic stability." *Perspectives on Politics* 13(01):42–54.

Hassanpour, Navid. 2014. "Media disruption and revolutionary unrest: Evidence from Mubarak's quasi-experiment." *Political Communication* 31(1):1–24.

Hersh, Eitan D. 2015. *Hacking the electorate: How campaigns perceive voters.* Cambridge University Press.

Horgan, John. 2008. "From profiles to pathways and roots to routes: Perspectives from psychology on radicalization into terrorism." *The ANNALS of the American Academy of Political and Social Science* 618(1):80–94.

Howard, Philip N. 2010. *The digital origins of dictatorship and democracy: Information technology and political Islam.* Oxford University Press.

Howard, Philip N, Aiden Duffy, Deen Freelon, Muzammil M Hussain, Will Mari and Marwa Maziad. 2011. "Opening closed regimes: what was the role of social media during the Arab Spring?" *Working Paper: Project on Information Technology and Political Islam* .

Huth, Paul K and Todd L Allee. 2002. "Domestic political accountability and the escalation and settlement of international disputes." *Journal of Conflict Resolution* 46(6):754–790.

Jervis, Robert. 1976. *Perception and Misperception in International Politics.* Vol. 49 Princeton University Press.

Jones, Benjamin T. and Eleonora Mattiacci. 2017. "A Manifesto,in 140 Characters or Fewer: Social Media as a Tool of Rebel Diplomacy." *British Journal of Political Science* forthcoming.

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

King, Gary, Jennifer Pan and Margaret E Roberts. 2013. "How censorship in China allows government criticism but silences collective expression." *American Political Science Review* 107(02):326–343.

King, Gary, Jennifer Pan and Margaret E Roberts. 2016. "How the Chinese government fabricates social media posts for strategic distraction, not engaged argument." *Working Paper* .

Krepinevich, Andrew F. 1994. "Cavalry to computer: The pattern of military revolutions." *The National Interest* (37):30–42.

Kristofferson, Kirk, Katherine White and John Peloza. 2014. "The nature of slacktivism: How the social observability of an initial act of token support affects subsequent prosocial action." *Journal of Consumer Research* 40(6):1149–1166.

Little, Andrew T. 2016. "Communication technology and protest." *The Journal of Politics* 78(1):152–166.

Łukasiak, Lidia and Andrzej Jakubowski. 2010. "History of semiconductors." *Journal of Telecommunications and information technology* pp. 3–9.

Lynch, Marc. 2011. "After Egypt: The limits and promise of online challenges to the authoritarian Arab state." *Perspectives on politics* 9(02):301–310.

McAdam, Doug, Sidney Tarrow and Charles Tilly. 2001. *Dynamics of Contention.* Cambridge University Press.

Mendelsohn, Barak. 2011. "Foreign fighters-recent trends." *Orbis* 55(2):189–202.

Milner, Helen V. 2006. "The digital divide: The role of political institutions in technology diffusion." *Comparative Political Studies* 39(2):176–199.

Mitts, Tamar. 2017. "Who are they and why do they go? The Radicalization and Preparatory Processes of Dutch Jihadist Foreign Fighters." *Working Paper* .

Morozov, Evgeny. 2012. *The net delusion: The dark side of Internet freedom.* PublicAffairs.

Neiwert, David A. 1999. *In God's country: The patriot movement and the Pacific Northwest.* Washington State University Press.

Parker, Geoffrey and Simon Adams. 1997. *The Thirty Years' War.* Psychology Press.

Pethybridge, Roger. 1967. "The significance of communications in 1917." *Europe-Asia Studies* 19(1):109–114.

Pierskalla, Jan H and Florian M Hollenbach. 2013. "Technology and collective action: The effect of cell phone coverage on political violence in Africa." *American Political Science Review* 107(02):207–224.

Rentschler, Eric. 1996. *The ministry of illusion: Nazi cinema and its afterlife.* Harvard University Press.

Rød, Espen Geelmuyden and Nils B Weidmann. 2015. "Empowering activists or autocrats? The Internet in authoritarian regimes." *Journal of Peace Research* 52(3):338–351.

Roosevelt, Franklin Delano. 1992. *FDR's fireside chats.* University of Oklahoma Press.

Rosendorff, B Peter and Todd Sandler. 2004. "Too much of a good thing? The proactive response dilemma." *Journal of Conflict Resolution* 48(5):657–671.

Sageman, Marc. 2008. *Leaderless jihad: Terror networks in the twenty-first century.* University of Pennsylvania Press.

Scheufele, Dietram A. 2000. "Agenda-setting, priming, and framing revisited: Another look at cognitive effects of political communication." *Mass Communication & Society* 3(2-3):297–316.

Shapiro, Jacob N. 2013. *The Terrorist's Dilemma: Managing violent covert organizations.* Princeton University Press.

Shapiro, Jacob N and Nils B Weidmann. 2015. "Is the phone mightier than the sword? cellphones and insurgent violence in iraq." *International Organization* 69(02):247–274.

Shirky, Clay. 2011. "The political power of social media: Technology, the public sphere, and political change." *Foreign affairs* pp. 28–41.

Simi, Pete and Robert Futrell. 2015. *American swastika: inside the white power movement's hidden spaces of hate.* Rowman & Littlefield.

Singer, Peter W and Allan Friedman. 2014. *Cybersecurity: What Everyone Needs to Know.* Oxford University Press.

Smith, Alastair and Allan C Stam. 2004. "Bargaining and the Nature of War." *Journal of Conflict Resolution* 48(6):783–813.

Spaaij, Ramón and Mark S Hamm. 2015. "Key issues and research agendas in lone wolf terrorism." *Studies in Conflict & Terrorism* 38(3):167–178.

Steinert-Threlkeld, Zachary C. 2017. "Spontaneous Collective Action: Peripheral Mobilization During the Arab Spring." *American Political Science Review* Forthcoming.

Trottier, Daniel and Christian Fuchs. 2015. Theorising social media, politics and the state. In *Social media, politics and the state. Protests, revolutions, riots, crime and policing in the age of Facebook, Twitter and YouTube*, ed. Daniel Trottier and Christian Fuchs. London: Routledge chapter 11, pp. 3–38.

Tuchman, Barbara Wertheim. 1962. *The guns of August.* Ballantine Books.

Tufekci, Zeynep. 2015. Algorithms in our midst: Information, power and choice when software is everywhere. In *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing.* ACM pp. 1918–1918.

Tufekci, Zeynep and Christopher Wilson. 2012. "Social media and the decision to participate in political protest: Observations from Tahrir Square." *Journal of Communication* 62(2):363–379.

Van Creveld, Martin. 2010. *Technology and war: From 2000 BC to the present.* Simon and Schuster.

Wawro, Geoffrey. 2002. *Warfare and Society in Europe, 1792-1914.* Routledge.

Weggemans, Daan, Edwin Bakker and Peter Grol. 2014. "Who are they and why do they go? The Radicalization and Preparatory Processes of Dutch Jihadist Foreign Fighters." *Perspectives on Terrorism* 8(4).

Weidmann, Nils B. 2016. "A closer look at reporting bias in conflict event data." *American Journal of Political Science* 60(1):206–218.

Wheeler, Tom. 2009. *Mr. Lincoln's T-Mails: How Abraham Lincoln Used the Telegraph to Win the Civil War*. Harper Collins.

Zeitzoff, Thomas. 2011. "Using social media to measure conflict dynamics: An application to the 2008–2009 Gaza conflict." *Journal of Conflict Resolution* 55(6):938–969.

Zeitzoff, Thomas. 2017. "Does social media influence conflict? Evidence from the 2012 Gaza Conflict." *Journal of Conflict Resolution* forthcoming.

Zeitzoff, Thomas, John Kelly and Gilad Lotan. 2015. "Using social media to measure foreign policy dynamics: An empirical analysis of the Iranian–Israeli confrontation (2012–13)." *Journal of Peace Research* 52(3):368–383.

Notes

[1]See Graeme Wood, What ISIS Really Wants. *The Atlantic,* March 2015.

[2]See Brendan I. Koerner, Why ISIS is Winning the Social Media War. *WIRED*, March 2016.

[3]See Daniel Treisman, Why Putin Took Crimea: The Gambler in the Kremlin. *Foreign Affairs*, April 2016.

[4]See Adrian Chen, The Agency. *The New York Times*, June 2015. and Neil MacFarquhar, A Powerful Russian Weapon: The Spread of False Stories. *The New York Times*, August 2016.

[5]See Matt Flegenheimer and Michael Barbaro, Donald Trump Is Elected President in Stunning Repudiation of the Establishment. *The New York Times*, November 2016.

[6]See Tamara Keith, Commander-In-Tweet: Trump's Social Media Use And Presidential Media Avoidance. *National Public Radio*, November 2016.

[7]See The Internet Big Picture: World Internet Users and 2017 Population Stats. *Internet World Stats,* March 2017.

[8]See Phoebe Parke, How many people use social media in Africa? *CNN,* January 2016.

[9]Words or phrases preceded by the # symbol, that allows users to show their support and or search for like-minded content

[10]See Bob Garfield, How Social Medias Short News Cycle Can Precipitate Bad Journalism. *Mashable*, June 2011.

[11]See What Missile Gap? *The Atlantic*, August 2013.

[12]Via his critique of the practice of indulgences in his pamphlet the *Ninety-Five Theses*

[13]See Social media in the 16th Century: How Luther went viral. *The Economist*, December 2011.

[14]See Anastasia Edel, Want to understand what Trump and Bannon are up to? Look to the Russian Revolution of 1917. *QUARTZ*, January 2017.

[15]Hugh Schofield, How Napoleon's semaphore telegraph changed the world. *BBC*, June 2013.

[16]See Patrick Bishop, Nicolae Ceausescu and Romania's Christmas revolution. *The Telegraph*, December 2014.

[17]See Development of the Radar Principle. *US Naval Research Laboratory.*

[18]See Saswato R. Dassept, The chip that changed the world. *The New York Times*, September 2008.

[19]See After Moore's Law: Double, Double, Toil and Trouble. *The Economist*, March 2016.

[20]Especially around election time (Huth and Allee 2002).

[21]See Joe Berkowitz, This is What a Creative Hackathon for Resisting Trump Looks Like. *Fast Company*, March 2017.

[22]See Robin Wright, In Iran, One Woman's Death May Have Many Consequences. *TIME*, June 2009.

[23]See Jared Keller, Evaluating Iran's Twitter Revolution. *The Atlantic*, June 2010.

[24]See Michael Levitin, The Triumph of Occupy Wall Street. *The Atlantic*, June 2015.

[25]Others have argued that this organizational "looseness" allowed the movement to survive and influence subsequent economic inequality arguments, including the rise of Senators Elizabeth Warren and Bernie Sanders as the Progressive wing of the Democratic Party.

[26]See `http://blacklivesmatter.com/`

[27]See Deen Freelon, Charlton D. McIlwain, Meredith D. Clark, Beyond the Hashtags: #Ferguson, #Blacklivesmatter, and the online struggle for offline justice. *American University Center for Media & Social Impact*, February 2016.

[28]Arab Uprisings, *BBC*, 2013.

[29]See JM Berger, The Toxic Mix of Extremism and Social Media. *PBS NOVA*, September 2016.

[30]I.e., see Ben Taub, Journey to Jihad: Why are teen-agers joining ISIS? *The New Yorker*, June 2015.

[31]See Judi Rudoren, Laderless Palestinian Youth, Inspired by Social Media, Drive Rise in Violence in Israel. *The New York Times*, October 2015.

[32]See Rukmini Callimachi, Not 'Lone Wolves' After All: How ISIS Guides Worlds Terror Plots From Afar. *The New York Times*, February 2017.

[33]See Adi Cohen, Volunteer Anti-ISIS Fighters Join Up On Facebook. *Vocativ*, June 2016.

[34]See Miram Berger, Twitter Just Suspended Two Kuwaitis Accused By The U.S. Of Financing Terror In Syria. *BuzzFeed*, August 2014.

[35]See Asher Berman, Syrian Rebel Use of Social Media. *Foreign Policy Research Institute*, October 2012.

[36]See Koerner, WIRED, March 2016.

[37]See Erica Chenoweth and Jeremy Pressman, This is what we learned by counting the womens marches. *The Washington Post: Monkey Cage Blog*, February 2017.

[38]See Eric Bradner and Sophie Tatum, March spurs efforts to get more women to run for office. *CNN*, January 2017.

[39]See Laura Seay, Does slacktivism work? *The Washington Post: Monkey Cage Blog*, March 2014.

[40]See Graeme Wood, The American Climbing the Ranks of ISIS. *The Atlantic*, March 2017.

[41]See Allison Hoffman, The Kids Behind IDFs Media. *Tablet Magazine*, November 2012.

[42]See Caitlin Dewey, Is Hamas winning the Twitter war? *The Washington Post*, November 2012.

[43]See Melanie Eversley, Dakota Access pipeline protests draw contrasts to Bundy. USA TODAY, October 2016.

[44]See Brian Feldman, Is Trumps Twitter Changing the Presidency? *New York Magazine*, January 2017.

[45]See Brian Ries, Syrias Cyberthugs. *The Daily Beast* September 2011.

[46]See Chen, *The New York Times*, June 2015.

[47]The name stems from allegations that they were paid fifty cents (in Renminbi) for each pro-government post.

[48]See Hannah Roberts, The Turkish Government reportedly blocked WhatsApp and other social media sites. *Business Insider*, November 2016.

[49]See Fang Jin, Wei Wang, Liang Zhao, Edward Dougherty, Yang Cao, Chang-Tien Lu, and Naren Ramakrishnan, Misinformation Propagation in the Age of Twitter. *Computer*, December 2014.

[50]See Peter Shadbolt, FireChat in Hong Kong: How an app tapped its way into the protest. *CNN*, October 2014.

[51]See Chauncey L. Alcorn, Heres What Tech ISIS Is Using to Spread Its Message. *Fortune*, July 2016.

[52]See Alex Hern, Facebook is chipping away at privacy–and my profile has been exposed. *The Guardian*, June 2016.

[53]See Evan Osnos, David Remnick, and Joshua Yaffa, Trump, Putin, and the New Cold War. *The New Yorker*, March 2017.

[54]See Brad Allenby, What Is "Military Artificial Intelligence"? *Slate*, December 2016.