

How Social Media Is Changing Conflict

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Abstract

Social media increasingly plays a role in conflict and contentious politics. Politicians, leaders, insurgents, and protestors all have used it as a tool for 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 media's 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 actors in response to communication technology changes, and (4) the new data that social media provides are not only an important resource, but also fundamentally change the information available to conflict actors, thereby shaping the conflict itself. In sum, social media's influence on conflict defies simplistic explanations that argue that it privileges incumbents or challengers.

Keywords

conflict, social media, repression, protest, radicalization, technology

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 (see Wood 2015). The rise of ISIS in war-torn Iraq and Syria is underscored by the group's ability to recruit nearly 30,000 foreign fighters

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from over eighty 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 (see Koerner 2016).

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 (see Treisman 2016). The eventual annexation of Crimea from Ukraine and continued conflict in the Donbass region of eastern Ukraine have coincided with Russia's extensive use of misinformation as well as cyberattacks against Ukraine to shape the Russian narrative (see Chen 2015; MacFarquhar 2016).

Finally in November 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 (see Flegenheimer and Barbaro 2016). Trump credited his use of the social media platform, Twitter, with providing a way that he could "fight back" against "unfair" stories, and that it helped "get the word out" to his supporters (see Keith 2016). 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 twenty-first 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 (see *Internet World Stats* 2017). This number is expected to grow as more than 50 percent of the world's population will gain access to the Internet (mainly through mobile devices), and with the fast growth across Africa and the developing world (see Parke 2016). 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 percent of world leaders have active social media presence on Twitter or Facebook (Barberá and Zeitsoff Forthcoming). Increasingly scholars are also using social media data to

measure political polarization and ideology (Barberá 2015a), examine conflict dynamics (Zeitzoff 2011, 2017), describe protest and repression dynamics (Gohdes 2015; González- Bailón et al. 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, 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 hashtags¹ or directly interact with elites. Finally, the speed of communication on social media, with tweets and posts being instantly shared around the world, has quickened the news information cycle, allows stories to “trend” and “go viral” much more quickly (see Garfield 2011). Yet, what does all this mean for conflict and contentious politics, as more leaders and regular citizens embrace social media?

Communication Technology Development

The effects of new communication technology have not received its 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, provides 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 (see *The Atlantic* 2013). 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 than conventional weapons. 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.² 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 to 1648) that killed between 25 percent and 40 percent of Germany’s population (Parker and

Adams 1997; see *The Economist* 2011). 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; see Edel 2017). It's 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 (see Schofield 2013). During the US Civil War, telegraph cables from the 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 twentieth century further played a pivotal role in key political events. Hitler and his Minister of Propaganda, Joseph 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 Ceaușescu accelerated the Romanian revolution of 1989 (see Bishop 2014).

Communication technology advances do not happen in a vacuum. Rather, they are 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 power of steam and steel, became a key component of military strength, and also influenced the development on communications such as the telegraph and the news media (Wawro 2002). In the interwar period (1918 to 1939), the increasing use of airpower and threat from naval attack led to the development of the first radar systems.³ 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 (1992) employed fireside chats to sell his domestic agenda and subsequent United States advances during World War II. More recently, the increasing power of semiconductor and communications technology (Lukasiak and Jakubowski 2010) laid the groundwork for sophisticated global positioning satellites, guided munitions, and drones (see Dassept 2008). 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 (See *The Economist* 2016). Thus it's difficult to disentangle the effects of new communication and media technology from those of military technological advances, and more general technological advances.

Communication and its role in conflict have 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.

Mass-based appeals are the other type of communication. These involve leaders and challengers seeking to coordinate mass behavior,⁴ or inhibit it, by controlling the narrative and manipulating the mass channels of communication (Bueno 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 among 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 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.

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 (see Berkowitz 2017).

The disputed 2009 Iranian presidential election 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 (see Wright 2009). 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 (see Keller 2010).

In the United States in 2011, protests against economic inequality and corporate influence in politics began in Zuccotti Park in southern Manhattan. This loose affiliation of leftist groups also incorporated environmental and antiwar messages to its economic message, and as it spread internationally it became known as Occupy Wall Street, or the Occupy movement (see Levitin 2015). 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).⁵

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 United States. Following the shooting death of Michael Brown by Ferguson Police Officer Darren Wilson, and subsequent nationwide protests, the movement gained widespread prominence (see <http://blacklivesmatter.com/>). 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 concrete set of goals (see Freelon, McIlwain, and Clark 2016).

Perhaps no recent social movement has had a greater influence on current geopolitics than the popular uprisings known as the Arab Spring (see BBC 2013). 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 et al. 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 increasing the ability of citizens to communicate (via social media) are 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 they thought leading to an ambiguous effect on protests (Little 2016, 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, including social media, has been on popular protests, insurgent groups have also embraced these technologies (Dafoe and Lyall 2015). Shapiro and Weidmann (2015) using cell phone data from Iraq and find that that increased cell phone activity actually reduced insurgent violence against coalition forces. They argue that this is due to increased reporting of insurgent improvised explosive devices. Conversely, Pierskalla and Hollenbach (2013) examine the effect of increasing cell phone coverage in Africa on political conflict, and they find that increased coverage led to increased violence. They argue that increased cell phone 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’s job of 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 held, and gives incumbents 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.

Ideology and Recruitment

One of the understudied issues with respect to social media and political participation is the effects of social media on ideology and recruitment. Many policymakers and scholars have argued that the Internet and social media, in particular, allow 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 likelihood of political participation through persuasion and mobilization. For instance, previous research has shown how the network effects of social media may induce political participation, from participation in the 2010 US midterm elections (Bond et al. 2012) to participation in the antiausterity movement (*Indignados*) in Spain (González-Bailón et al. 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 lower 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 counterterrorism 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; see J. M. Berger 2016).

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 2015b).

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

are able to radicalize themselves and then carry out the so-called lone-wolf attacks, which are particularly hard to detect by security services (RudrenSpaaij 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 (see Callimachi 2017). 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 is needed. 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, 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 are 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, that is, nonviolent 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.

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 (see Cohen 2016) as well as solicit financial donations (see M. Berger 2014). 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 (see Berman 2012). ISIS and other Salafi-jihadist groups have used social media as 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 (see Koerner 2016).

Nonviolent 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 to 5.2 million attendees (see Chenoweth and Pressman 2017). The march organizers used social media to spread the word about the protests and also to collect attendees e-mail addresses to facilitate recruitment to follow-up political activity and identify new women to run for political office (see Bradner and Tatum 2017). 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” (Seay 2014) or in the context of Salafi-jihadists, “keyboard jihadis” (see Wood 2017). 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” (Zeitsoff 2017). Israel announced the beginning of the conflict with a tweet from its official Israel Defense Forces (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 its 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 (see Hoffman 2012). What is particularly important is the fact that Hamas was able to compete with Israel’s much larger budget (see Dewey 2012).

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 Forthcoming). Protest movements have also used social media to build bridges across movements in geography. For instance, the relationship between BLM, Dakota Access Pipeline protests, and other antiestablishment movements have all offered support and awareness for each other’s causes via social media (see Eversley 2016).

The most important and overlooked development may be the increasing use and manipulation of social media by world leaders. Over 75 percent of world leaders have an active Twitter or Facebook account (Barberá and Zeitsoff Forthcoming). Leaders and governments are using social media to campaign and rally support for their issues both domestically and internationally, as well 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 uses Twitter to rally his followers and set the domestic and international agenda with his provocative tweets. During his campaign, he used Twitter to attract mainstream media attention to policies and explain his position to his followers (see Feldman 2017). 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 (see Ries 2011) and Russia under Vladimir Putin (see Chen 2015) 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,⁶ to crowd out critical commentary and provide distraction on Chinese microblogs (King, Pan, and Roberts 2016). Governments also selectively engage in censorship.

For instance, in response to challenges to the incumbent Justice and Development Party (AKP), 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 (see Roberts 2016). 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.

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 sock puppets 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 (Jin et al. 2014). Actors thus may have the ability to provide false and misleading information

Table 1. Use of Social Media during Conflict and Implication.

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 (J. M. Berger and Morgan 2015; Mirts 2017)	ISIS-affiliated groups have used Twitter, WhatsApp, and other network apps to raise the group's 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. off-line) influence the type of recruit?
2012 Gaza conflict "Twitter war" (Zeitsoff, Kelly and Lotan 2015)	In November 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 Zeitsoff Forthcoming)	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 microblog 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?

favorable to their side that may not be fully vetted. The speed of information also makes actions that may be 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 as each side shifts its 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 microblogs 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 (see Shadbolt 2014). Other groups from dissidents to ISIS sympathizers have moved from Twitter and open networks to encrypted apps such as WhatsApp and Telegram (see Alcorn 2016).

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. That is, 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 do 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 (Zeitsoff 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 exhibits 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 the presence of radicalization or for signs of future attacks. When groups use social media to galvanize protestors or recruited 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

Table 2. Effects and Implications of Communication Technology on 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 are not just a boon for researchers. Leaders, insurgent groups, protestors, and so on, all have the ability to gauge support for various policies and actions on social media, and this ability alters subsequent conflict dynamics.

media provides unprecedented data and the potential for new and exciting insights, scholars of conflict cannot treat the data as an unlimited, representative fire hose. The data itself are 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.

Toward 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 (see Hern 2016), 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 hacked e-mails by WikiLeaks were synchronized with online pro-Trump Twitter bots to amplify the messages and to provide maximum impact against the candidacy of Hillary Clinton (see Osnos, Remnick, and Yaffa 2017). Thus, scholars should further seek to marry the study of cyber conflict 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 (Allenby 2016). The effect of this increasing reliance on automated detection and defense on conflict are likely to be less predictable and potentially nonlinear.

The following four research questions can serve as road map 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, that is, protest–repression, civil war, and so on. 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.

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Notes

1. Words or phrases preceded by the # symbol that allows users to show their support and or search for like-minded content.
2. Via his critique of the practice of indulgences in his pamphlet the *Ninety-five theses*.

3. Development of the Radar Principle. *US Naval Research Laboratory*. Accessed on July 16, 2017. <https://www.nrl.navy.mil/accomplishments/systems/radar/>
4. Especially around election time (Huth and Allee 2002).
5. 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.
6. The name stems from allegations that they were paid fifty cents (in Renminbi) for each progovernment post.

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