

Communication, technology, and political conflict: Introduction to the special issue

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Abstract

Modern communication technology is emerging rapidly, with tremendous social implications. The key innovations introduced by this technology include the increased pervasiveness and the rich nature of digitally transmitted information, and a new type of network structure over which it is disseminated. The articles in this special issue present theoretical and empirical research on the relationship between communication technology and political conflict and violence. There are different pathways through which this can happen: technology can facilitate collective action, but at the same time give governments the opportunity to censor content and gather intelligence about dissidents. Also, audience effects can be introduced by the rich and instant transmission of information from conflict regions. The contributions to this special issue can be divided into three groups. A first group of articles looks at the effects of ‘old’ communication technologies with state-of-the-art methods, which is necessary to see if the effects of modern technology really differ. A second category of articles focuses on ‘new’ communication technologies, and try to assess their effect on conflict both theoretically and empirically. The third and last category reverses this question, and looks at the reflection of war and violence in (traditional and new) media channels.

Keywords

conflict, information technology, communication

Motivation

By the end of the year 2012, there were more Internet-connected mobile devices than people on earth. This technological innovation is not limited to the developed world: the strongest growth in mobile internet traffic will occur in the Middle East and Africa (Cisco, 2012). This trend illustrates two important developments that have taken place over the last decades. First, technology creates increasingly dense global networks of communication, linking individuals closer to others at home and abroad. Second, the use of this technology is becoming more pervasive in our everyday lives. With powerful mobile devices and wireless networks, information can be shared and received almost anywhere and anytime.

This increase in the exchange and diffusion of information has major effects on social outcomes. Research in development economics, for example, has demonstrated the effects of cell phone coverage on market dynamics (Jensen, 2007). Similarly, political behaviorists

have found that many types of Internet-distributed information increase civic engagement (Boulianne, 2009). Until recently, however, international studies scholars have been relatively silent when it comes to examining the effects of ICT on conflict mobilization and escalation. Were Facebook and Twitter really key catalysts of the Arab Spring? Do social media really serve as ‘Liberation Technology’ and make conflict less frequent? Conventional wisdom tends to believe so. To this day, however, there is little scientific evidence to back up these claims.

This special issue provides a comprehensive selection of new research on the topic of communication, communication technology, and political conflict. The articles grew out of a series of workshops bringing together scholars working on the topic. These workshops were held at

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the 2013 Annual Convention of the International Studies Association in San Francisco, and at Yale University in late 2013. This introductory article aims to do three things. First, it provides a discussion of the innovations introduced by modern information- and communication technology (ICT), and their implications for social phenomena. In this special issue, we mostly deal with two basic innovations: (i) mobile technologies that allow for instant communication almost independently of location, and (ii) digital computer networks such as the Internet that enable communication independently of centralized broadcast media. Second, given the innovations of modern ICT, the introduction discusses the implications for political conflict. In which direction do we have to push research in our field to gauge the social implications of these changes? Third and last, this article gives an overview of the contributions to this special issue, and highlights their progress along the aforementioned research directions.

Innovations: What is new about modern ICT?

What are the precise innovations brought about by the rise of modern information- and communication technology? The technologies discussed in this special issue include those designed to transmit information between individuals and places. Using technology for this purpose is of course not new; newspapers, telephones, radio, and television constitute examples of 'old' types of communication that have been around for decades or even centuries. 'Modern' communication technologies, in contrast, are the more recent successors of these technologies that have emerged over the last two decades. Internet and cell phone communication are the most prominent examples of these technologies, and the majority of works presented in this special issue deals with these two. The characterizing feature of these technologies is digitalization, or in other words, the representation of the information as electronic, computer-readable pieces. Digitalization of information makes it possible for information to be transmitted using computer-based channels, allowing for a number of innovations as compared to 'old' communication technologies. In the following, I discuss three of these innovations.

The first and most obvious one is the massively increased *pervasiveness* of digitally transmitted information. With *pervasiveness*, I mean the increased availability of digitally transmitted information, as regards speed and coverage. Due to digitalization, the task of encoding and transmitting information can be automated, such that computers now take care of creating, routing and

delivering packets of information between each other. Most importantly, this automation manifests itself in the speed of transmission. Digital information is now able to reach almost any point on the globe in a matter of milliseconds. Key to this is computer network technology, where the messages to be transmitted – such as a news article on a web page, an e-mail, or a spoken conversation – are encoded as small data packets. These packets are then independently routed along different network links, only to be reassembled at their destination. This mechanism improves redundancy, but can also dynamically adjust to varying capacity of network channels. Modern ICT not only improves speed, but also coverage. For example, wireless phone networks are a lot less costly to expand to remote places as compared to ordinary, landline-based systems. This means that modern ICT can allow many more people access to communication than more conventional technologies. Last, as a result of transmission speed and increasing coverage, but also of advances in hardware, access to communication has become omnipresent in our everyday lives. Using mobile Internet-connected devices such as smartphones, many people can now communicate almost independently of time and place.

Second, and related to the previous point, the *nature of the information* transmitted can change. Earlier technologies are usually tied to a particular type of information. For example, newspapers are limited to text and photos, while ordinary phone technology is limited to voice. Digital transmission, in contrast, can be used to send any type of content, as long as it can be converted into a digital format. This applies to almost any type of information; text and photos are commonplace, as are voice and videos. This means that conversations not only become faster and more frequent, they also become richer as regards the content of what is transmitted. This richness in content can, in some instances, increase the social effects of communicated information, as we will see below.

Third, the *type of network* used to disseminate information is changing. Earlier technologies usually rely on one of two prototypical kinds of network. A broadcast network is one where a central node distributes information to large number of receivers, as for example in TV or radio networks. Obviously, the role of this central node is important, and the direction of the flow of information is clearly defined (out from the center to the receivers, not vice versa). In contrast, in a peer-to-peer network, links are being established between individual nodes. A telephone network is an example of this type of architecture. Here, the direction of links is not fixed; for example, calls can be established in all

directions. Modern digital networks combine features of these two types of network. The Internet has a decentralized structure; while large hubs such as popular websites do exist, the network does not depend crucially on them. In fact, the Internet can establish both broadcast- and peer-to-peer connections. For example, similar to radio or TV networks, it features a large number of ‘broadcast’ websites that distribute articles, photos, and videos to network users. At the same time, similar to a peer-to-peer network, it can establish connections between pairs of individual users, as for example for the exchange of e-mail messages. These two types of connection were central during the early phase of the Internet, but have in recent years been supplemented with a hybrid type of network: In what is typically called the ‘Web 2.0’, ordinary users can become broadcasters. Through social media websites such as Facebook or Twitter, users provide content that can be shared with large numbers of people.

Effects: Why should ICT matter for conflict?

Equipped with a basic understanding of the technical changes introduced by modern ICT, we can now turn to its social and political consequences, in particular those related to political conflict. The aim of this section is to sketch out different lines of reasoning that can be invoked when it comes to ICT and political violence. As we will see below and in the remainder of this special issue, these are recurrent themes in the literature on ICT and conflict.

Collective action

One of the most frequently mentioned ways that ICT is linked to political violence is through its effects on collective action. Typically, it is argued that the increased availability of information fosters mobilization of people, and gives existing rebel forces better means for coordination (Pierskalla & Hollenbach, 2013). This effect should hold both for cell phone technology and the advantages it entails on the battlefield, but also for Internet-based services such as Twitter or Facebook in driving people to join a protest. In fact, the 2011 Arab Spring was frequently seen as being catalyzed by modern ICT; for example, according to *Time Magazine* (2011) Wael Ghonim of Egypt was one of the most influential people in the world in 2011 due to his use of Facebook for organizing the Tahrir Square protests.

Censoring

Proponents of the beneficial effect of modern ICT hold that due to the global nature of the Internet, it should be

less prone to government interference. Recall the distinction between broadcast and peer-to-peer architectures of networks outlined in the previous section: ‘Old’ communication technologies such as newspapers, radio or TV distribute information through a central hub – a TV station, for example. By design, then, these networks are susceptible to government censorship; all that governments have to secure is control over these central hubs in order to shape the broadcast information in their favor, as is commonly done in dictatorships (Friedrich & Brzezinski, 1965). With Internet-based communication often relayed through servers abroad, this type of censorship appears to become more difficult in the digital age. This can have effects on conflict motives; citizens that are exposed to unfiltered information from abroad may become aware of their own situation and more critical of the regime.

Intelligence

Information flows in digital networks, however, may also provide new opportunities for intelligence-gathering. Recent revelations about the sophisticated monitoring capabilities of Western intelligence agencies have confirmed suspicions about how digital technology can be used to track users and the information they transmit. Because of the above-mentioned automation of information transmission, it is now possible to also automate the collection of intelligence, which dramatically expands the number of users and volume of traffic that can be processed. Since this type of intelligence gathering is costly, it is typically assumed that it can be brought to bear mostly by governments. The case of China’s Great Firewall comes to mind (MacKinnon, 2011), which imposes strong limits on the content that Chinese users can access. However, intelligence gathering can also be done by cell phones, as shown by Shapiro & Weidmann (2015) who emphasize the advantage of this technology for receiving tips from the population.

Audience effect

As discussed above, digital communication can convey much richer accounts of events on the ground, as for example the gruesome material on violence in the Syria conflict. Therefore, conflict parties have to be increasingly aware of the repercussions certain actions can have elsewhere. With little control over what information about a conflict is reported, pictures and videos of violence can quickly go viral, possibly contributing to triggering foreign policy responses (Robinson, 1999). The improved reporting mechanisms for violence can have

strong effects in the policy realm, but also for scholars. Only slowly is conflict research starting to tap into these technologies for scientific purposes (Zeitsoff, 2011).

So what is left for conflict research to do? The key challenge is that the four mechanisms outlined in the previous paragraphs rarely ever occur in isolation from each other. For example, as much as protesters can coordinate with the help of the Internet, it may at the same time help sinister governments trace activists and members of the opposition. Cell phone technology may benefit rebel groups and make them more efficient in fighting the government, but at the same time it allows the targeted population to share information about rebel activity, which in turn benefits counterinsurgency. There is nothing inherently 'good' or 'bad' about information technology; its effects on conflict and violence depend on the actors using it, the way they use it, and the type of information that is transmitted.

This potential simultaneity of different effects creates challenges both for theory and empirical analysis. In many cases, it is difficult to derive theoretical expectations as to why a particular technology would benefit one side more than the other. In other words, we rarely ever have unambiguous hypotheses about the net effect of communication technology. Rather, theoretical models need to take into the fact that technology operates on different sides in a conflict, potentially with opposite effects. By the same token, empirical analyses face difficulties when trying to assess the net effect. One of these challenges is measurement: which conflict actor has access to a particular communication technology, and how far does coverage extend? Depending on the level of detail required for measurement, cooperation with service providers is required, which in turn can raise problems of data access and data sharing. Similarly, establishing a causal effect of a particular technology is sometimes difficult, as the introduction of coverage is rarely ever rolled out randomly in a quasi-experimental fashion.

Contributions to the special issue

The contributions to this special issue attempt to address these theoretical and empirical challenges. Articles come from three broad categories. Rather than being overly enthusiastic about new ICT and its effects, it seems useful to take a step back. This is why a first group of articles analyzes the effects of 'old' communication technologies with state-of-the-art methods. This helps us find out if and where modern ICT really makes a difference. A second group of articles focus on the effects of modern ICT,

trying to gauge their effect on conflict both theoretically and empirically. The third and last category of articles reverses this question, and looks at the reflection of war and violence in (traditional and new) media channels. The following paragraphs introduce these three kinds of contribution.

The first part of the special issue examines mechanisms that are frequently mentioned in conjunction with the debate around the 'new' media, but apply equally to the 'old' ones. Crabtree, Darmofal & Kern (2015) depart from the frequently-held assumption that media and communication channels are key catalysts of popular mobilization, since they convey information about the current level of protest. Using a natural experiment, they analyze how TV coverage affected the decision of people to join the protests in East Germany in the weeks leading up to the collapse of the regime. Weidmann (2015) studies the effect of international linkages as measured by phone connections between countries in contributing to the transnational spread of ethnic violence. While spatial proximity has frequently been shown to be fostering diffusion, the analysis demonstrates that communication channels seem to have a similar function, illustrating the 'death of distance' at the international level (Cairncross, 2001). A direct comparison between 'old' and modern technologies is offered by Warren (2015). Comparing the impact of radio reception on collective violence to the one of social media access, he finds diverging effects: the former is pacifying in general, but the latter seems to increase violence.

The second part of the special issue includes the majority of articles, and looks specifically at the effects of 'new' technologies. At the theoretical front, there is an article that takes issue with the frequently-mentioned claim that mobile information technology unilaterally benefits dissident groups by giving them greater organizational capacity. Shapiro & Siegel (2015) look at information sharing between the civilian population and the government, which works in exactly the opposite direction. Using game-theoretic modeling, they tease out the conditions under which a conflict-promoting or a conflict-inhibiting effect manifests itself. Three empirical articles scrutinize these effects and the role of technology during episodes of violence and contention. Bailard (2015) examines the role of cell phone technology in triggering ethnic conflict. She finds mixed support for the effect of cell phones on motivation for conflict, but also on collective action. Rød & Weidmann (2015) scrutinize the frequent claim that the Internet can serve as 'Liberation Technology' in autocratic environments. Results from their macro-level analysis of Internet

introduction show not only that regimes that are most afraid of freedom of expression are more likely to expand coverage, but also that there is no evidence that the expansion of coverage is associated with democratization. Together, these results support the notion of ‘repression’ rather than ‘liberation’ technology (Morozov, 2011). Last, Gohdes (2015) presents an analysis of Internet blackouts during the civil war in Syria. She argues that these blackouts can weaken the coordination of the opposition, and can thus provide a tactical advantage to government forces. Evidence from Syria supports this claim; Internet blackouts seems to be strategically applied prior to large military operations by the government.

The last part of the special issue turns the previous question in its opposite direction and studies the repercussions of conflict in the digital discourse. For conflict researchers, this is interesting for two reasons. First, reports in the new media are often first-hand accounts of ongoing events, and thus a more detailed resource of information about activity on the ground. Second, violent conflicts generate their own dynamics in the digital realm. Because of the accessibility of these digital exchanges, it is now possible to trace these debates using large datasets. An article by Zeitzoff, Kelly & Lotan (2015) shows how Twitter can be used as a probe into policy discussions, using the Iran–Israel dispute as an example. The analysis demonstrates the power of this approach and how it can be extended beyond English sources to Farsi and Arabic. A final article by Baum & Zhukov (2015) provides a fresh look at reporting bias in news coverage of revolutions, and reminds us to treat news reports with a sufficient amount of caution. While outlets in democratic contexts emphasize revisionist ideas, the opposite is true for those in non-democratic regimes.

A delayed summary and conclusion

The articles in this issue analyze the mutual effects of communication, technology, and political conflict. They do so from a theoretical or empirical direction, employing micro- and macro-approaches, and focusing on different types of technology. Since the development of many of these technologies is a relatively recent phenomenon, so is the scientific analysis of their social effects. For that reason, the editor of the special issue believes that a longer, more in-depth critical reflection is required. Dafoe & Lyall (2015) have taken it upon them to provide a synergistic concluding perspective on the articles presented in this special issue. Most importantly, however, they point their finger at the shortcomings of

this research: theoretical inconsistencies, and measurement and design problems. Such a critical reflection is necessary to pave the way for improving our work in the future.

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