

# PeaceTech: The Liminal Spaces of Digital Technology in Peacebuilding

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This collection of articles contributes to the growing body of research on how technology is affecting peacebuilding, peace and conflict studies, and research methodologies in the field. Assumptions about the use of technology for peace are interrogated, such as the purported deepening of inclusivity and widening of participation that technology provides to peacebuilders and communities. It frames the discussion from a peace-focused perspective, providing a response to the work done by others who have focused on the ways technology makes violence more likely. This supports a holistic discussion of the ways that technology can have an impact on contentious social and political processes. By expanding the base of knowledge about how technology can be used for peace and violence, we hope this collection increases the understanding of the circumstances under which technology amplifies peace.

**Keywords:** peacebuilding, digital technologies, research methodologies, conflict

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# Introduction

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The use of digital communication technologies for social change has been a topic of great interest to academics and journalists in the last decade. While TV, radio, and computing have been available for half a century in most places, mobile phone and Internet access in developing countries has surged in the last ten to twelve years. This has had fascinating implications for how peacebuilding and state building are done both at the elite and local levels. In academic peace and conflict research, technology has been used for half a century when scholars such as Singer (1972) began databases to make statistical inferences about war and peace. However, it wasn't until the digital revolution and the arrival of new media and information and communication technologies (ICTs) that we have seen more serious discussion on the utility and ethics behind the use of technology in peace research. This collection of articles focuses on changes in technology access since the early 2000s, as digital communication shifted to mobile platforms and the world entered what Heeks refers to as "ICT4D 2.0" (Heeks 2009).

There have been numerous examples of these initiatives in civil society, such as Ushahidi, which was developed as a response to election violence in Kenya in 2008 and represents attempts at using crowdsourcing to map reports of violence during a conflict. Over the last ten to fifteen years, interest in the use of technology for peace has burgeoned, with organizations such as the United States Institute of Peace, with its PeaceTech Lab, finding corporate partners interested in risk management to fund their activities, Stanford, Harvard, and MIT building research centers dedicated to peace-related issues and technology, and many smaller tech-related activities happening in the peacebuilding sector.

Of course, the use of digital technology for social change is a complex issue since technology can be used for both good and bad. The space technology inhabits is still being debated, and the ways in which it is and can be used for peacebuilding and development are in flux. It can therefore be said that the use of technology in peacebuilding is in a state of liminality. Anthropologists view the liminal moment as a temporary state when roles and boundaries are being negotiated, whereas those studying organizations see it as a more longitudinal experience of ambiguity within a changing context (Beech 2011). Typically, the liminal process is ritualistic, starting with a "triggering event" (Beech 2011, 287) conducted in specific places for a specific period of time with certain rules of conduct. Therefore, liminality is a series of actions to achieve the reconstruction of identity in such a way that the new identity is meaningful for society. Liminality can be used to classify people, occupations, hierarchical roles, organizations, and events and spaces (Beech 2011, 287). With the recent introduction of digital communication technologies into peacebuilding, a negotiation and construction of the space these technologies hold is still in question. This betwixt and betweenness (Turner 1967) means that it is unclear whether digital technologies will graduate to be seen as tools for positive social change or whether they may impede peacebuilding processes.

Of course, digital technologies will continue to develop and grow and it is therefore fundamental that we look further into the potential uses of different kinds of technologies—from crowdsourcing to big data—to understand their capabilities for contributing to sustainable peace and also their capabilities for causing harm. This symposium does not impose judgment on technology in peacebuilding, but instead looks at the ways that technology can be used to enhance peacebuilding efforts and explores some of its challenges as

peacebuilding scholars and practitioners attempt to harness the power of technology for peace.

### Peace, Conflict and Post-2005 Digital Technology in the Academy

While the role of technology in politics and development has been debated within academic and policy circles for over thirty years, the political and social sciences have only begun serious scholarship on the role of technology in localized peace and conflict in the last decade. This work has often been done through a security or violence-risk framework, analyzing the likelihood that technology will be used to organize violence as opposed to building peace. One widely cited empirical study on the relationship between technology and violence was conducted by [Pierskalla and Hollenbach \(2013\)](#) with an analysis of the relationship between mobile phone access and local violence using geographic data to demonstrate a statistical relationship between mobile phone access and ease of organizing violence in Africa. This study was one of the first to explicitly address the relationship between ICTs and political violence, bringing what had up to this point been a discussion in the development and public policy fields into the political science arena. Their methodological approach was econometric, with a focus on using instrumental variables to try to identify a causal relationship between mobile phone access and violence. While their focus was on the organization of violence, the dynamic of improving co-operation and coordination has lessons for peace and violence prevention as well.

Peace and conflict scholars have continued building on these quantitative approaches in the recent *Journal of Peace Research* special issue on the role of ICTs and digital technology in processes of political and ethnic violence. [Weidmann's \(2015\)](#) study on the effect of communication technologies on contagion effect in ethnic conflict and [Bailard's \(2015\)](#) discussion of the role of mobile phones in making violent collective action easier take traditional analyses of conflict and re-analyze them within the context of a digitally connected polity. [Shapiro and Siegel \(2015\)](#) provide discussion of how ICTs can increase the capacity for civilians to support nonviolence when facing a threat of insurgent violence, providing an inflection point for readers to ask the question: how can these technologies be used to support peaceful or cooperative outcomes?

The peace practice and policy communities within peacebuilding and development are ahead of the academy with these questions. The literature on the role of ICTs in peace and human security is overshadowed by the literature on ICTs in violence and conflict ([Tellidis and Kappler 2016](#)) and methodologically has relied more on case studies, policy analysis, and field surveys. Previous work on technology applications in peacebuilding practice includes [Larrauri and Kahl \(2013\)](#), who provide a wide overview of using different classes of ICTs in peacebuilding practice and identify where different classes of technology enhance different types of interventions. They create a hierarchy for types of peace interventions, then match appropriate technologies to these interventions. This provides a theoretical grounding to the peace tech discussion, which has often been anecdotal in nature. [Martin-Shields \(2013\)](#) and [Muggah and Diniz \(2013\)](#) discuss how ICTs support nonviolence and peacebuilding in both Kenya and Latin America, highlighting social and political contextual factors that create a space for technology to be used for positive instead of negative outcomes. [Martin-Shields \(2013\)](#) focuses on the unique contextual factors in Kenya that, in spite of violence occurring, create the space for technology to be used for peaceful ends.

### The Uses of Technology for Research and Social Action

It remains a challenge to identify mechanisms that support the peaceful use of technology, whether as a tool used by citizens and governments to support peace

and security or a mechanism to enhance peace research and data collection in violence-affected communities. To put these challenges into perspective, the articles in this symposium focus on the political and social aspects of technology use for peacebuilding and crisis response, as well as the approaches and challenges of using technology as a tool for implementing peace research.

The forum contributions by Atalia Omer and Charles Martin-Shields focus on contextual issues with technology, specifically how it is used to encourage, facilitate, or manage sociopolitical processes. Both pieces seek to explain the behavioral and social sides of technology in contentious social and political processes, framing technology as a tool that enhances or supports these embedded processes. The contribution by Pamina Firchow and Roger Mac Ginty discusses the implications of using digital technologies in the data collection and analysis of peace and conflict research. They offer reflections on whether technology is germane to calls for more humane and human approaches to peace and conflict.

Omer focuses on the question of intersectionality between protest movements, looking at how social media has become a mechanism for harmonizing and shrinking the distance between social justice and peace movements. The article discusses the role of social media in articulating an intersectional approach to global social movement activism. The particular focus of this discussion is the case of Palestine solidarity and its deployment in various contexts through rhetorical strategies of analogy and reductive metaphoric metonymy. The juxtaposition of images from the Palestinian Occupied Territories with Ferguson and the Arizona-Mexico border, for instance, emboldens solidarity and intersectional analysis of conflict. Accordingly, activists identify both direct connections between one instance of conflict and another, and thus the struggles for justice are likewise deemed interrelated, as well as analogical analytic resources as in the employment of a postcolonial critique that allows an established analysis of one case (i.e., Native Americans) to shed light and clarify the power dynamics and ideological formations involving another case (i.e., Palestinians). The article traces the logic and employment of an intersectional framing of Palestine activism, illuminating how such an intersectional turn is enabled by social media activism. Secondly, the article analyzes how the global reach of technology's constructive contribution to global social activism also participates in rhetorical conflation of divergent cases of conflict and oppression in a way that empties the cultural and sociohistorical specificities of particular conflict zones. To accomplish this, Omer engages literatures in social movements and intersectionality theory, social media activism, and cultural theory and rhetoric.

Martin-Shields looks at collective processes of managing limited goods during crises and how technology and information use vary during postdisaster response periods in Samoa. He frames the question of building peace as a collective process of maintaining stability in the face of external pressures. To frame this as a social process, he frames the maintenance of stability as a collective action process; in this case, stability is the public good and people have to contribute limited resources to support this collective process. When the collective process breaks down, the risk of violence emerges. This could be intra- or interhousehold, intercommunity, or larger-scale violence. Within the collective action process, rapid communication and information sharing is essential, and this is where digital technologies such as mobile phones and social media can play a role in supporting stability. Martin-Shields explores how Samoans trust and act on a bounded set of technologies during natural disaster periods, framing his survey around how people gathered and acted on information during and after Cyclone Evan in December 2012.

Firchow and Mac Ginty discuss the challenges associated with their ongoing research on local knowledge and indicators of peace, highlighting the unique strengths and weaknesses of using mobile phone surveys as a data collection tool in violence-affected localities. They argue that there has been a turn toward more

human and humane approaches to the study of conflict-affected communities. The policy interest in local perspectives has been reflected in the research community with a discernible trend in political science and international relations toward ethnographically influenced work that seeks to capture finer-grained, “authentic” data. The article focuses on the potential tensions between calls for a more human and humane approach on the one hand, and the opportunities offered by technology (particularly mobile phones) on the other. The article draws on an ongoing research project led by the authors, but also draws more generally on a wider literature on the methodologies and epistemologies of contemporary research.

This collection of articles contributes to the growing body of research on how technology is affecting peace, peace and conflict studies, and research methodology in the field. Assumptions about the use of technology for peace are interrogated, such as the purported deepening of inclusivity and widening of participation that technology provides to peacebuilders and communities. It frames the discussion from a peace-focused perspective, providing a response to the work done by Pierskalla and Hollenbach (2013), Weidmann (2015), and others who have focused on the ways technology makes violence more likely. This supports a holistic discussion of the ways that technology impacts contentious social and political processes. Technology is only an “amplifier of human intent” (Toyama 2011, 75), and by expanding the base of knowledge about how technology can be used for both peace and violence, we hope this collection increases the understanding of the circumstances under which technology amplifies peace.

## Tweet Your Cause: Cyber Witnessing and the Case of Palestine Solidarity

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Expressing frustration with the normalization of Israeli Occupation under the framework of the decades-long “peace process,” the Boycott, Divestment, and Sanctions (BDS) global campaigns (Bargouti 2011; Carter Hallward 2013) began in 2005 in response to a call initiated by a host of organizations that comprised Palestinian civil society. A major dimension of BDS campaigns has focused intently on puncturing the reigning narrative in the media, with its typical orientalist logic and tropes (McAlister 2005; Dunsky 2008). This focus on the media and on challenging the narrative of Israeli self-defense is instrumental for generating ethical outrage and solidarity work through BDS tactics. The struggle for Palestinians, in other words, needed to take place on a discursive level where the media, and in an enhanced fashion new media technologies, are instrumental. Calls for action often challenge the dominant discourse through images that witness life on the ground for the Israeli Occupation of Palestinians. Social media has become a primary purveyor of these images, bypassing the corporate media’s silencing of Palestinian narratives (Qui and Sanders 2014; Sabawi 2014). Focusing on the case of Palestine solidarity, this article illumines the capacity of digital activism to cultivate cross-cutting global solidarities through witnessing and discursive critique. Likewise, the article analyzes, employing interpretative methods, how the global reach of technology’s constructive contribution to social activism foregrounds the logic of intersectionality in order to cultivate solidarity, but also participates in the rhetorical conflation and abstraction of divergent cases of conflict and oppression.



### Intersectionality

The focus of this study is not how new media participates locally in producing counterknowledge and subsequently in mobilizing online and offline peacebuilding efforts by both Israeli and Palestinian organizations. Instead, I examine the peacebuilding potential of new media pertaining to the global Palestine solidarity movement and what happens to the images from Palestine and to Palestinian embodied experiences, once refracted through a broader lens. From a global perspective, new media are pivotal as witnessing tools in generating ethical outrage and commitments through knowledge production and raw images of suffering, martyrdom, and protest. New media, in other words, accelerates and emboldens the involvement of third parties in developing nonviolent peacebuilding efforts. Cyber activism is effective in generating solidarity and BDS actions or, at least, declarations of intent to divest from companies profiting from the Occupation. To this degree, it carries an indirect peacebuilding outcome considering divestment a tactic to produce radical change and end the Occupation. The effectiveness of information and communication technologies (ICTs) and social media in particular was evident in the form of unprecedented pro-Palestine marches and demonstrations globally during the Israeli assault on Gaza in summer of 2014 (Abu-Ayyash 2015). Such marches suggest the shifting contours of the narrative through which the Israeli-Palestinian conflict is interpreted and made intelligible. ICTs intensify the capacity to build counterknowledge and organize (Castells 2012; Bennett and Segerberg 2012; Trottier and Fuchs 2015), two indispensable dimensions of social movements' ability to perform collective actions in global and transnational contexts (Lipschutz 2005; Tarrow 2011). However, there is an important distinction to be drawn between the effectiveness of ICTs in generating greater counterknowledge production and outreach (Seitz 2003; Stamatopoulou-Robbins 2005; Marmura 2008) and the question of framing the Palestinian cause. The framing of Palestine solidarity can be discerned through a careful online content analysis that suggests the foregrounding of intersectionality as a diagnostic lens interpreting the Palestinian predicament primarily as a form of violation of human rights and international law by Israel.

Solidarity with Palestine is easily appropriated through the lens of intersectionality, which was born out of the context of feminist theorizing to illuminate the interconnections among various sites of oppression and subjugation (Crenshaw 1989). Specifically, intersectionality gained traction in feminist efforts to capture the complex interrelations among intersecting social divisions such as race, gender, ethnicity, and class. Intersectionality seeks to expose the constitutive rather than additive interpretation of enmeshment among various identity markers (woman, black, poor or man, white, affluent). In other words, feminist theorists avoid essentializing "blackness" or "womanhood" because such essentializing often results in the conflation of identity narratives rather than the encapsulation of contextual particularities and experiences of marginality. While intersecting, each margin is ontologically distinct and demands unique modes of analysis and historical engagement (Yuval-Davis 2006, for example). However, intersectionality as a tool for coalition building relies, as I show below, on a unifying (master) narrative over and against which social justice activism can take place across diverse sociocultural and historical terrains. New media technologies are especially conducive to such flattening because they allow rapid knowledge production through predictable networking and narrowcasting patterns that enhance rather than challenge predetermined attitudes (Kelly 2014). Intersectionality has been integrated into the vocabulary of global civil society activists and has become a pivotal narrative for organizing global manifestations of Palestine solidarity activism. It especially offers a

counter to global and transnational Palestine or Israel solidarity that coalesce around religious and/or ethnoreligious narratives and sets of arguments. Before turning to how an intersectionality analysis might enable the move from witnessing to the consolidation of solidarity with Palestine, let us reflect on the state of social media activism and political change. This analysis will clarify the ambivalent role of new media technologies as both tools for heightening violence and conflict as well as for engaging in cross-sectional, intersectional, and global social justice activism.

### **Social Media Activism and Political Change: Utopia or Dystopia?**

Clearly the role of social media in generating solidarities for sociopolitical, religious, and geopolitical change is not exclusively in the hands of global civil society organizations oriented by the vocabularies of human rights and responsibilities. The extensive and calculated virtual presence of organizations such as ISIS (Ajbaili 2014; Berger 2014) suggests the instrumentality of social media and new digital technologies rather than their normative value orientation, their prior lauding as tools (Alexander 2011), or their embodiment of cosmopolitanism and postnationalism. Social media technologies are merely that—technologies—and they can be used toward radically divergent ends. Indeed, as “liberation technologies,” Diamond (2010) illumines, ICTs can broaden the public sphere, embolden pluralistic exchanges, bypassing mainstream and governmental control of information, and monitor and expose abuses through coordinated text messaging, open-source software, and mobilization of “smart mobs” (Rheingold 2003) through social media. At the same time, ICTs can enable echo-chamber effect and “hate-mongering, pornography, terrorism, digital crime, online espionage, and cyberwarfare” (Diamond 2010, 80). Without falling into the fallacies of “technological utopianism” and “chronocentricity” (Diamond 2010, 71), digital ICTs can accelerate and amplify (in conjunction with films and other artifacts) the possibility of cultivating “communities of witness” that might be propelled toward action on behalf of a distant or domestic cause (McCaughy and Ayers 2003; Torchin 2012). Thus, solidarity networks and activism have become ever more integral to the interdisciplinary analysis of conflict cycles and peacebuilding processes.

“Images and accounts of war suffering,” as Butler argues, “are a particular form of ethical solicitation, one that compels us to negotiate questions of proximity and distance” (2012, 135). Drawing on Jewish philosopher Emmanuel Levinas, Butler here ponders the connections between the images of distant suffering with which we are inundated and the possibility of articulating ethical obligation for (nonegological) action. Elsewhere, Butler scrutinizes the ways in which war is framed in the media and how such framing often renders some people’s lives as not fully “grievable” by articulating them as “others” (Butler 2009). She also underscores how new media technologies allow for changing dynamics in interpreting grievability by reinforcing recognizability of one’s humanity in the other (Butler 2009, 67). Butler’s focus on implications of framing via media to ethical actions or inactions illumines both the role of new media in reframing and how such a reframing, in the case of global Palestine solidarity, entails an ironic move toward abstraction through conflation of multiple sites of ungrievability and shared precariousness. It entails a move from challenging othering and ungrievability to asserting precariousness through intersectional recognition of shared ungrievability of bodies: from black bodies in the United States to Palestinian bodies in Palestine. Intersectionality, in other words, operates as an ethical solicitation for action in solidarity with a distant other. It does so by rendering intelligible what is strange by shaping it in one’s own image and through the employment of one’s own narrativity about power and marginalization. This is

where, as will become clear in the concluding parts, I identify limitations in the discursivity of such moves as peacebuilding tools. Yet, witnessing is key—even if not automatic—to generating ethical action. New media participates in such witnessing in increasingly profound, plural, and grassroots ways.

Analyzing the shift from “witnessing” to concrete action in extracyberic spaces requires a sociocultural interpretive lens that can unpack the narrativity organizing images and news into an intelligible story that evokes an emotional and ethical connection to the cause. The scholarly discussion concerning social media’s instrumentality in generating political action in third-party global “bystanders” is often dated back to Iran in 2009 but certainly has crucial roots in the post-Soviet “colored revolutions,” the Philippine’s “coup de text,” and the Saffron Revolution in Burma (Rheingold 2003; Chowdhury 2008). Dabashi writes about the democratic youth protest in Iran following the elections theft of June 2009: “This was a public spectacle on a massive scale, where *the participants were in fact the reporters*, taking snapshots of their own acts and relaying them around the globe. The alienated, formal defiance of art had now come back to inform the making of a whole new kind of politics” (2011, 323; emphasis added). The fact that the image of Neda Aqa-Soltan’s death circulated globally via social media and evoked solidarity with the Iranian youth supports Dabashi’s insight concerning the protesters’ role as reporters of their own struggle. Through the production of images, which was enabled by the revolutionary affordability of small recording devices and the accessibility to cyber spaces, the protestors were empowered. This empowerment cannot be measured by supposed “success” since the protests were crashed by the regime. However, the profound image of Neda’s death empowered through its capacity to generate solidarity globally and especially to activate the Iranian diasporas.

This mode of empowerment goes beyond the level of the functionality of ICTs as constituting potentially “technologies of liberation, accountability and mobilization” as Diamond has it (2010). Indeed, the Iranian use of Twitter certainly carries these potential functions in the same way as the Kenyan Ushahidi (Swahili for “testimony”) functions, with external add-ons such as FrontlineSMS as an effective open-source software enabling mapping of crises and abuses through relatively low-cost two-way text messaging (Diamond 2010, 77), and thus Twitter provides necessary tools for citizen journalism. The images of youth and other civilians shot for their protest against oppressive regimes allow for generating solidarity cross-sectionally and globally. The instant witnessing of death and protest allow for producing an instant martyrology and outrage that could translate into ethical solicitation for collective actions. Agha-Soltan’s tragic death by a bullet fired from the forces of the Iranian regime was recorded by amateur bystanders and immediately uploaded to YouTube, Facebook, and Twitter. The sheer magnitude of shares of images and videos on the Internet eventually compelled the mainstream media to cover the event. Amin writes, “Agha-Soltan’s death on camera became a symbol for the Iranian antigovernment movement, and online social media amplified that symbol for the rest of the world to see” (2010, 64). The case of Agha-Soltan and Teheran 2009, also dubbed “Iran’s Twitter Revolution” (or the “Green Revolution”), as well as the Twitter Revolution in Moldova in the spring of the same year, suggest the potential efficacy of digital tools in the formation of political protest and solidarity through the exposition of human rights abuses (Mungiu-Pippidi and Munteanu 2009). The global community could now see atrocities that had previously been kept hidden under a centralized control of information and censorship.

Since the case of Agha-Soltan unfolded on camera, many more young people’s deaths in Egypt, Palestine, and other locations of protest were recorded and broadcasted virally. For instance, the graphic image of Shaimaa al-Sabbagh, an Egyptian activist shot and killed in the course of a nonviolent fourth-year



anniversary commemoration of the Revolution in Cairo's Tahrir Square, reverberated through virtual spaces in January 2014 (Mackey 2015). Agha-Soltan's and al-Sabbagh's deaths online turned them into martyrs. We can identify here how witnessing enabled by the ubiquity of personal recording devices became instantaneous via social media. Likewise, the rawness of the images tends, despite the risk of "compassion fatigue" (Moeller 1999), to generate shock and an ethical outrage, which may lead to tangible solidarity work. Cyber sharing and the accessibility of handheld recording devices certainly broaden the capacity of third-party observers to witness the unmediated realities of protest and war. However, the relation between witnessing and political action is not always self-evident (Butler 2012), nor is it always direct—nor, as the case of the Egyptian Revolution of 2011 demonstrates, is the materialization of social media's mobilization for democratic collective actions a guarantee of sustainable revolutionary success. Instead, this relation needs to be interpreted within a narrative that connects the spectator to the "cause" in meaningful ways (Newsom and Lengel 2012; Bebawi and Bossio 2014). The question that pertains to my analysis below is how the images of witness are woven together in a narrative about Palestine through the lens of intersectionality in order to exert ethical solicitation for action.

While proliferating, a scholarly analysis of cyber activism is still nascent, especially when it comes to contending with its peacebuilding capacities for generating and participating in constructive (democracy-promoting) change processes (Varzi 2006; Wolfsfeld, Alimi, and Kailani 2008; Mitchell 2012). Considering the media's role in peacebuilding processes often generates a complex sociocultural analysis necessary for imagining reconciliation and healing. Focusing specifically on religion, Mitchell (2012) underscores the narrative-defining role of the media and how media-mediated portrayals impact violence and peace (see also Hoover 2006; Morgan 2007; Campbell 2010; Wagner 2011). Mitchell is reacting to the inclination to highlight the media's association with the promotion of violence (Weimann 2006) and thus he explores the Internet and other media's constructive participation in peacebuilding. Cyber activism may or may not facilitate constructive interventions. Yet the Internet is especially conducive to the cultivation and emboldening of solidarities.

Some analysts have been quick to identify the elasticity, democratic features, and shock value associated with cyber activism as novel advantages while also clarifying that cyber activism is only one component of civic activism and social movement mobilization—one that needs to be accompanied by more traditional modes of analysis on the streets' civil resistance in particular (Amin 2010; Gladwell 2015). Digital media in and of itself can be instrumental in the process of strengthening governmental surveillance and thus can be exploited for undemocratic agendas, as may have occurred in the case of Iran's cyber army or Israel's surveillance and litigation of statements made on Facebook and other social media outlets (Brown and Rotem 2015). Other critics urge against overintoxicated approaches to "cyber utopia," which attributes emancipatory capacities to cyber space itself (for example, see Morozov 2009, 2011). The Iranian "Twitter Revolution," after all, resulted in a bloody crackdown and "what seemed like Leipzig in 1989," Morozov claims, "was beginning to resemble Beijing of the same year" (2009, 11). Indeed, acknowledging the aforementioned effectiveness of new media in strengthening certain aspects of social movement activism on the ground, the limits of an intoxicated narrative about new technologies' instrumentality in bringing about sociopolitical change are nonetheless exposed and with them the boundaries of ethical solicitation on behalf of distant causes. In fact, the Iranian Twitter Revolution is a narrative with a much-reduced traction on the ground, which is reflective of a skewed reliance on English language tweets in Iran and in Iranian diasporas (Esfandiari 2010), combined with a relatively easy (just a click away) appropriation and essentialization of Agha Soltan's death

video, particularly by Iranians in the diasporas (Naghibi 2011). What Morozov (2011) calls the “Google doctrine,” betraying both cyber-utopianism and Internet-centrism, generates a “net delusion” that could very much work in favor of authoritarianism and against the impulses of marginalized and disempowered individuals. Other qualified assessments of social media as a tool of protest and political change have emerged since the early manifestations of the Twitter Revolutions and through an analysis of the instrumentality of Facebook, Twitter, and YouTube in the uprising in Egypt to topple Mubarak in 2011 (Lim 2012) and in generating global solidarity with Palestine, as distinct from local, on-the-ground organizing (Siapera 2014). The cumulative analysis of social media and digital communication technology, therefore, points to an ambivalence concerning its revolutionary capacities, both for cultivating hateful and violent agendas and for emboldening sociopolitical collective action for constructive peacebuilding processes.

One motif that emerges from the analysis of protests unfolding on Facebook, Twitter, and YouTube is the role of diasporas’ and third parties’ solidarities with relevant causes and how the technologies contribute, by virtue of their instantaneity and potentially viral scope, to the consolidation and entrenchment of solidarities and recruits for the cause (see also Al-Ali and Koser 2002; Appadurai 2003; Bernal 2014). The question I highlight here relates to the emergence and consolidation of Palestine solidarity. The choice of this specific case, as will become clear below, is indicative of the effectiveness of new media technologies in witnessing distant events and in generating passions, outrage, and calls for action. The case, as well as its historical roots and its rhetorical employment within Islamist and Arabist rhetoric (Nafi 1998), is especially relevant to the analysis of its parallel appropriation by global social justice movements. One track views Palestine as the embodiment of the colonialist legacy and the Crusades, while the other symbolizes the struggle for Palestine as a forefront of the interrelated struggles against militarism, neoliberalism, homonationalism, racism, indigenous rights, and so forth. These functional parallels illumine the need to pay careful attention to the narratives underlying raw or *unmediated* cyber reporting and the limits of global or transnational solidarity for generating local peacebuilding processes as per the aforementioned qualified accounts of cyber utopia. The human rights-oriented global solidarity movement for Palestine, witnessed via social and other media, has become instrumental for broadening the scope of third-party solidarities, again as evident in the mass coordinated global sets of protests in reaction to the Gaza War of 2014 and the increasing successes of the BDS campaigns among various circles of activism. Images circulated from Palestine, therefore, work as ethical solicitation, effectively reflective of and participating in changing narratives that render Palestinians as grievable as black bodies in the inner cities of the United States, thereby puncturing the hold of orientalist and racist discourses.

### Witnessing as Peacebuilding? Witnessing through Counter-Media

Because the corporate media participates in an orientalist discourse (Amin-Khan 2012), cyberspace becomes, through what Bernal calls “infopolitics” (2014, 29–54), a location for articulating counternarratives. Cyber activism became instrumental in documenting or, put another way, witnessing the Occupation. Cyberspace creates the possibility of bypassing gatekeepers of knowledge production (see, for instance, the Nakba Oral History Project), often through citizen journalism (Torchin 2012, 175). The visualization of the Israeli Occupation and the dissemination of images through alternative channels have been pivotal for generating global solidarity.<sup>1</sup> Images of Palestinian kids beaten by Israeli soldiers,

<sup>1</sup>See Visualizing Palestine. “Visuals.” Accessed June 30, 2016. <http://visualizingpalestine.org/#visuals>.

harassed and burnt by Jewish settlers, bombed to death, and then arranged in long lines for postmortem photo-ops are designed, following the theatrical principles of Gandhi and Martin Luther King, Jr., to provoke third parties whose ethical outrage, it is hoped, will then propel them to contribute to the elimination of such structural, cultural, and acute forms of violence. The production of counterknowledge, which has always been a crucial dimension of social movement dynamics (Eyerman and Jamison 1991), is thus greatly facilitated by new media technologies.

Cameras have been identified as tools of resistance and thus indispensable in efforts to convey Palestinian experiences under the occupation. B'Tselem (Israeli Information Center for Human Rights in the Occupied Territories) implemented this insight when it launched its Camera Project in 2007. The Camera Project involved the distribution of video cameras to Palestinians who were then trained to document their daily lives in especially tense areas. The resulting video footage showed patterns of harassment and human rights abuses. The footage was also reinforced by a Palestine-Israel film industry (from *Five Broken Cameras* to *Gatekeepers*) that is centrally reliant on the dynamics and the human ramifications of the Occupation and has had wide circulation in the West due to recognition from Hollywood. Likewise, raw, amateur videos capturing Israeli brutality are continuously uploaded to YouTube and made available to viewers through multiple links. Witnessing cameras are ubiquitous and are even interpreted as weapons against the mainstream narrative authorizing the Occupation.

Indeed, there is a risk of compassion fatigue and cultural anesthesia (Moeller 1999; Dean 2004). However, the visuals circulating in the countermedia, erupting occasionally into the mainstream, consistently expose Israel's claims of self-defense as misguided, ideological, and plain wrong. This certainly disrupts the hegemonic discourse through questioning of *doxa* in Bourdieu's mode of analyzing the processes of social reproduction. Yet the truth-telling capacity of handheld and inexpensive mass recording devices is effective as a call for positive or negative action, cultural sociologists tell us, only if the images that tell the truth fit into a particular narrative people are already telling about their own identity and its positionality vis-à-vis the cause or issue around which the mobilization would occur (Polletta and Jasper 2001; Nepstad 2002; Della Porta and Diani 2006; Polletta 2006). Narratives are distinct from collective action frames. They have a "heuristic plot" that "make[s] a situation intelligible," they foreground the viewpoints of the protagonist, the narrator, and the audience, and they remain within a narrow repertoire of plotlines (Nepstad 2002, 136). Likewise, narratives are effective in mobilizing for a distant cause if they include "victimhood rhetoric" and "a simplified but clear moral struggle between good and evil" (Nepstad 2002, 137). Palestine solidarity operationalizes intersectionality as its master narrative, which thus renders Palestinian sufferings intelligible and refracted through an ethical outrage and moral clarity that produces action. New media technologies effectively convey and reinforce plotlines with viral "raw" images and through other methods.

Film studies offers further tools for analyzing the relevance of images, documentaries, and virtual communities to sociopolitical and cultural processes of critique, protest, and reframing, as well as to related dynamics of war and peacebuilding. Torchin complicates the "Enlightenment-style faith in the power of knowledge that underpins not only the sentiment of popular film narratives but also the hopes of journalists and human rights workers: if people know, they will act accordingly" (2002, 1). She problematizes this optimistic imagining, instead analyzing how visualizing transgressions of human rights raises awareness and generates responses through the framing concepts of testimony and witnessing. Visualization produces "witnessing publics" that, as defined by McLagan, mean "a subject position that implies responsibility for the suffering of others" (quoted in Torchin 2012, 3).

Appropriating Bourdieu's concept, Torchin interprets the notion of "witnessing publics" as a field of cultural production (2012, 14), which is highly complementary and consistent with the aforementioned sociological work on narrativity and long-distance mobilization. The transformative and witnessing capacities of the visuals of human rights violations, therefore, are neither self-evident nor inevitable and thus call for a careful cultural and sociopolitical analysis. The effectiveness of witnessing (like speech acts) and thus the transformative capacities of information depend on "a community conducive to listening and responding" (Torchin, 2012, 5) to ethical solicitations (Butler 2012).

The truth-telling capacity of films and visuals, however, is no guarantee for justice, as evinced by footage of the brutal killings and racially motivated assaults by police on black men and women in the United States. Witnessing is often followed by acquittal. Likewise, the witnessing of genocides in the 1990s did not result in sufficient response from the international community. Nonetheless, cameras (and amateur photographers and filmmakers) have become foundational to social movement activism and protest activism in Palestine, as well as in other contexts such as Rwanda and Darfur. In the latter case, a whole host of Internet and transmedia practices contributed to raising awareness and encouraging activism by way of influencing legislators in the United States (Torchin 2012). More than mere grassroots' production of counterinformation or monitoring of self-evident abuses, witnessing in, by, and through the media, in other words, is a complex process when action and ethical response depends on the broader cultural field and its topography vis-à-vis the consumers of media bearing witness (Moeller 1999; Ashuri and Pinchevski 2009; Torchin 2012).

Hence, visual media technologies understood through Jenkins's (1992) concept of "transmedia storytelling"—in which a film is no longer a stand-alone product, but rather one entry point among multiple delivery channels that include books, video games, toys, fans' websites, YouTube mashups, and so forth—suggest the possibility of grassroots' participatory (not merely passive consumption of images and stories) engagement in reimagining the story. Influenced by De Certeau's notion of "textual poaching" (1984), Jenkins moves away from the pessimistic application of Althusser's critique of mass media's relation to ideology and state apparatuses where mass media functions to interpolate individuals into an ideological construct. Jenkins identifies (in perhaps too utopian a manner) that a countervailing force to the conglomeration machine occurs from the ground up through a participatory culture that can contribute (albeit in a form of weak resistance) to disinterpellation, despite the mass media's function as an interpellation machine (Jenkins 1992, 2006a,b). Jenkins's "transmedia storytelling" is applicable to an analysis of visual media technologies' participation in conveying (often contradictory) messages and cultivating solidarities and calls for action. Consciousness-raising and calls for action in the case of Darfur, for instance, involved transmedia campaigns that included video games with live links to contact relevant representatives in Congress (Torchin 2012, 172–211). The launching of Citizentube for "broadcasting your cause" within YouTube in 2007 anticipated the virtual success of Kony 2012 (a short video produced by Invisible Children, Inc., to yield outrage and actions against Joseph Kony's atrocities in Uganda), which garnered 100 million views within six days. To reiterate, however, mere exposure is not necessarily sufficient to generate solidarity or, in the language of Jenkins's intervention in film studies, "fandom" (1992, 2006).

Online fandom, for Jenkins (2006b), enables the cultivation of participatory cultures that embody a "cosmopedia," a concept attributed to Lévy (1998, 216), in which fans are transformed into interactive audiences through sharing, cross-referencing, and poaching. They are thus able to assume a tangible and democratic influence on the product (i.e., the story, film, or TV series) itself. Fans can become actors in extrafilmic spaces as well. "Cyberspace," Jenkins observes, "is

fandom writ large” (cited in [Torchin, 2012](#), 172) and thus it carries the potential to enhance the traction of communities of witnessing in moving from cyber- to actual political and social spaces of contention. However, data visualization during the time of the assault on Gaza in 2014 suggests that very little cross-fertilization occurs among Palestinian or Israeli witnessing communities and that the augmenting capacity of the Internet may only reify through the “echo chamber” positions toward which “fans” are already predisposed ([Kelly 2014](#)). Beyond the circles of solidarity or fandom, there are also questions about the concrete subjects of fandom and their essentialization as an “artifact” within the communities of witnessing.

Film theory, therefore, proves highly effective in analyzing the advent of cyber activism and its relation to traditional modes of protest and solidarity. In some respects, new media technologies simply augment the scope of communities of witnessing and the capacity of translating fandom into nonvirtual action. In the case of Palestine solidarity, transmedia plotlines are increasingly intersectional, employing the case of Palestine as at once a manifestation and embodiment of colonialism, racism, capitalism, neoliberalism, militarism, and a violation of indigeneity and other human rights. Intersectionality, therefore, offers the narrative intelligibility pivotal for effective ethical solicitation for action on behalf of a distant cause. It does so, as I anticipate above, by abstracting and conflating divergent narratives of suffering and marginality.

### **Intersectionality Activism and Social Media Technologies**

We already saw that intersectionality operationalizes a diversified approach to epistemologies ([Hankivsky 2014](#)), scrutinizing the relationship between power and the production of knowledge. This approach also broadens possibilities for resistance and coalition-building grounded in articulating shared experiences of marginality and oppression. One prominent example of the operationalizing of intersectionality was the World Social Forum—Free Palestine (WSF-FP) meeting in Porto Alegre, Brazil, in November 2012. This meeting marked the increasing centrality of Palestine within global justice movements. WSF-FP included over 125 workshops on various aspects of Palestine solidarity work from BDS campaigns to Palestinian women’s organizations to the queer antipinkwashing movement ([Kates, Adely, and Shahshahani 2013](#)). Special emphasis was given to articulating possibilities for framing Palestine as a key issue for a global “joint struggle” for immigrant rights, indigenous rights, political prisoners, civil and human rights, environmental justice, and labor, and against militarism, capitalism, neoliberalism, racism, homophobia, ecological destruction, and the exploitation of natural resources, mass incarceration, and so forth ([Kates, Adely, and Shahshahani 2013](#)).

Threading these various sites of struggle through the case of Palestine involves an analogical mode of analysis: there are some similarities between the experiences of African Americans and Palestinians. However, they are not identical. Contextual distinctions, which feminist theorizing of intersectionality would underscore, were hard to maintain in the context of the WSF-FP because the discourse moved from deriving inspiration and exchanging notes among various contexts of social movement activism to highlighting Israel’s complicity in global militarism and surveillance technologies. Nevertheless, Palestine liberation gained symbolic significance as the trope for the global movement for justice. This is evident in the words of Angela Davis in her keynote speech at the National Meeting of Jewish Voice for Peace (JVP) in Baltimore, Maryland, in March 2015. Davis spoke about the cause of Palestine as pivotal for overcoming structures of injustice everywhere. Other panels at the JVP conference included leaders from the #BlackLivesMatter movement who went on a delegation to Palestine. An antecedent of this delegation was a Palestine-based ironic Internet show of solidarity



with Ferguson through images of people holding signs that made comparisons between Israeli military oppression and American police brutality. Indeed, the operative concept underlying the consolidation of Palestine as a metaphor is that of intersectionality. It is intersectionality that gave birth to the activist notion of core-sistance of “joint struggle,” which has become the organizing mantra for groups such as Students for Justice in Palestine (SJP),<sup>2</sup> an extensive student-led organization in North America and New Zealand.

What I have discerned from extensive interviews with Palestine solidarity activists and a scrutiny of their public voices is that intersectionality enables connecting sites of struggle through an articulation of a systemic, cultural, and global analysis that likewise connects ideological and hegemonic structures. This point is especially clear in articulating the connections between the “Apartheid” wall that underlies the Occupation of Palestinians and the wall along the Mexico-US border. The play on the walls also illumines how Palestine solidarity and on-the-ground resistance efforts appropriate images from other struggles in order to render intelligible Palestinian narrative as one of oppression and occupation. Hence, words such as “reservations,” “Bantustans,” and “Apartheid” are readily employed to ethically solicit outrage and action. The national meeting of JVP in 2015 echoes and strengthens the SJP’s intersectional approach in this regard. In a breakout session titled “From the Southwest Border to Palestine: Occupation, Militarization, and Resistance,” the moderator framed the discussion by first highlighting that the Southwest border and Palestine are different. Nonetheless, she proceeded to introduce the increasing similarities, both materially and ideologically. She, as well as the participants on the panel and the conference more broadly, underscored that observers can easily identify patterns of borrowing and echoing between the two cases. In both instances, they argue, one can trace the connections between religious warrants and territorial greed. In both instances, one can identify the ever-elaborated and militarized apparatuses of control and the progressive disruption of indigenous cultures. A prohibition against teaching and marking the Nakba (the Palestinian disaster of 1948) is echoed by a ban on ethnic studies at Arizona State University and a host of other discriminatory laws, such as the notorious “show me the papers” law. Likewise, the familiar landscape of checkpoints and walls is normalized in the context of the Mexico-US border. Furthermore, the activists highlight not only similarities in the two images of violent walls, checkpoints, and racist policies, but also an actual connection between the two. This connection is established through patterns of financial and military cooperation and contacts between the United States and Israel. In this particular case, the connection is easily established through the fact that the Israeli company Elbit Systems Ltd., which provided much of the infrastructure of segregation, surveillance, and control of the Palestinians, was also contracted by the United States Department of Homeland Security Customs and Border Protection to erect surveillance systems along the US-Mexico border. Backed by hard data that shows real connections between the two systems of control (for example, see Miller 2015), Palestine solidarity activism becomes an occasion for a global and transnational analysis of militarism and neoliberalism. Accordingly, undergirding each struggle is the need to articulate its connections to other struggles and thus the common discursive forces they need to denaturalize.

Deploying Palestine as a trope is not a recent phenomenon. The struggle for Palestine has a history of being employed metaphorically (Tawil-Souri 2015; see also Omer 2009, 2015). The media (especially visual cultural artifacts) has historically participated in globalizing the Palestinian cause as a trope in three critical

<sup>2</sup>See the Students for Justice in Palestine website. “Beyond Solidarity: Announcing the 2014 National SJP Conference at Tufts University.” Accessed August 4, 2015. <http://www.brooklynsjp.com/home/beyond-solidarity-announcing-the-2014-national-sjp-conference-at-tufts-university>.

ways: (1) the circulation and translation to Arabic of radical literature (e.g., Franz Fanon, Mao Zedong, Vo Nguyen Giap, Che Guevara); (2) the circulation of information back to the Global South through the formation of a “revolutionary cinema unit,” political posters employing Communist aesthetics, and an anti-imperial framing that also filtered into progressive groups outside the Global South, which then produced; (3) poetry (e.g., Jean Genet), films (e.g., Jean-Luc Goddard), and other cultural artifacts (Tawil-Souri 2015, 148–49). These multilingual and transnational circulations of the Palestinian cause were initially primarily secular and leftist. By the end of the 1980s, Palestine was thus equated with a range of other causes: “the globally oppressed, exploited workers, Nation of Islam, Black Panthers, Nepalese Maoist Group, and Communist Party of India, among many others” (Tawil-Souri 2015, 149). With the dissolution of the global left, solidarity with the Palestinian cause relocated, partly due to “media-terrorism spectacles” and partly due to conventional Hollywood orientalism. Palestine then became the focus of those groups who viewed colonialism and imperialism as enduring legacies in need of resistance. With the dissolution of the promise of socialist and communist ideologies, Palestine became the focus of Islamism (though the Islamist and Arabist focus on Palestine was certainly not new) on the one hand, and (quasi-)left movements on the other. While occupying opposing locations along a spectrum, both leftist and Islamist groups came to employ Palestine rhetorically as representing the ills of imperialism and neoliberalism (Tawil-Souri 2015, 150; see also Omer 2009, 2015).

Crucial for the argument here, the globalizing media was ever more instrumental in reframing Palestine. With the developments of satellite television in the 1990s, Al Jazeera’s coverage of the Second Intifada, and the West’s involvement in Afghanistan and Iraq, Palestine’s role was emboldened in generating rare cross-local Arab and Muslim support. As far as gaining traction for the Palestinian cause in the West, the path was different, however. In the 1980s, some analogies were drawn with South Africa’s Apartheid by Nelson Mandela and Desmond Tutu, while Latin American leaders, such as Evo Morales and Hugo Chavez, explicitly condemned Israel and equated their own critique of the United States with the Israeli occupation. Palestine, generally, became a leftist banner. When the call for global solidarity was articulated in 2005 by members of Palestinian civil society, it also capitalized, reignited, and reframed this legacy of analogizing and conflating Palestine with other struggles. Palestine became integrated not only into the agenda of the World Social Forum meetings, but also into the Occupy Wall Street movement and its critique of capitalism and globalization, as well as the interrelated global justice movements from Greenpeace, Amnesty International, and the Zapatistas (Tawil-Souri 2015, 151–53). Hence, contemporary digital media technologies reinforced historical patterns of reifying Palestine, a process that was already indebted to earlier iterations of media activism. The upshot is that the products of the countermedia’s witnessing were refracted through an intersectionality that diminished contextuality through long-distance appropriation. Such abrogation of the local in its complexities resonates with Morozov’s (2011) worry about net delusion and cyber utopianism. This worry about abstraction in the process of rendering intelligible a distant other as a mode of ethical solicitation is, to reiterate, a worry distinct to the role of the media in fostering third-party solidarity. On the ground, new media accelerates and reinforces various facets of peacebuilding and protest activities, from effective counterknowledge production to coordinating protest. Media’s instrumental witnessing capacities, however, always need to be analyzed interpretatively, highlighting the operations and contents of cultural fields on the modes in which supposedly unmediated images exert ethical solicitations.

After this brief exploration of global Palestine solidarity, we can conclude that intersectionality functions similarly to the transmedia of Jenkins as denoting

comprehensive marketing techniques of cultural artifacts. In operationalizing intersectionality in the context of global justice activism, each site of injustice is related to another and each offers a different entry point into a broader, logically coherent, and hegemonic story about colonialism, militarism, neoliberalism, and racism. This story underlies the WSF's conceptualization of what it is designed to do, which provided the context for its assumption of Palestine as a cause. It also underpins how fandom translates into offline activism where the struggles for the distant issue of Palestinians is fought over in signs carried by protesters on the Mexico-US border or in #BlackLivesMatter's marches, for instance. It is not the case that intersectionality was born out of the age of Twitter, Facebook, and YouTube, but rather that the positing of a unified logic threading together distinct sites of injustice and political struggles (in an additive rather than a constitutive manner) is greatly reinforced by and especially suitable for the speed, scope, and patterns of cyber activism, narrowcasting, and participatory fandom cultures. Particularly significant is the degree to which these media forms enable the appropriation and essentialization of images and long-distance causes. They are distinctly conducive to long-distance activism, which possesses some flaws as suggested by the various Twitter Revolutions. Ferguson is not Palestine, and Palestine is not the Zapatistas or the Native Americans. Analyzing these sites through a totalizing narrative works against the intended objectives of globally oriented social justice movements to think constructively about peacebuilding. Even while the global Palestine solidarity set of movements frames their activism as a response to the call from Palestinian civil society, their reification of Palestine-qua-cause through an intersectional narrativity significantly diminishes their ability to see complexities and variations and thus to exert an on-the-ground intervention beyond reactionary resistance. The peacebuilding potential of fandoms, therefore, is significantly limited by their distinct cultural fields, and it would be through a cultural analysis that complicates simplistic overarching Manichean master narratives that witnessing publics can more constructively engage in long-distance change processes.

## **Technology and Collective Action during Crisis: The Role of ICTs in Samoan Disaster Response, with Applications for Violence Prevention**

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Information communication technologies (ICTs) are rapidly changing the ways that societies and polities organize and share information (Bott and Young 2012). This article explores how ICTs fit into the sociopolitical processes of crisis response at the local and individual level, looking specifically at information sharing, use, and trust during disaster response. I use the case of Independent Samoa, a small island state in the South Pacific that deals with an annual cyclone threat, as a case study of how people use information during socially and politically complex crisis response scenarios. My primary question is whether local actors trust and act on information at the local level by using cellular phones, social media, and computer-based Internet, or if they prefer centralized, vertically integrated sources of information such as government messaging and mass media to inform their decision-making during crises.

Given the collective nature of Samoan society and the importance of the family unit in decision-making, I assumed that people in Samoa would value crowd-sourced local information as much as they would information from broadcast media. The results of the surveys showed that when people were gathering information before an event they preferred broadcast media and professional reporting, but as they had to make decisions to act during and after a crisis their local networks of family and village leadership become increasingly important. There were also localized variations in how much trust people placed in broadcast and official media based on previous experiences with government response after disasters. This highlighted how important reliable administrative processes are to people and the negative impact that badly organized postdisaster relief can have on a population's trust in official information long after a disaster.

Previous research has shown that where there are mobile phones, there is increased risk of organized violence. Since there are indicators that ICTs affect the ability of people to organize for violence and peace, my goal is to extend this research by gathering data on which types of ICTs are trusted by individuals enough to take action. Essentially, in a region where people have access to technologies like mobile phones, does the information people get from their mobiles actually have enough perceived validity to act on? While disaster response is different from conflict prevention on many levels, especially with regard to trust and social capital, there are dynamics at work during disaster response that speak to issues in violence prevention and peacebuilding. Nel and Righarts (2008) find that there is a robust relationship between natural disasters and conflict events, particularly in the case of rapid-onset, large-impact natural disasters in countries that have weak institutions. The United Nations Development Programme (UNDP) (2011) found that there were two types of conflict dynamics that emerged depending on the size and scope of the disaster. In cases where the disaster was small and had a rapid onset, there was limited risk of national-level conflict, but the risk of local violence went up; larger-scale, longer-onset disasters like droughts tended to exacerbate national tensions, leading to onsets of national levels of violence. In Samoa, the disasters are rapid onset and have different effects across the country, impacting the north more critically than the south, possibly increasing the risk of local violence.

Since ICTs add value by increasing communication capacity, I selected collective action as a theoretical frame for understanding how ICTs fit into local crisis management processes. Lupia and Sin (2003) discuss how ICTs have effectively made the marginal costs of group information management negligible since it is now easy to send mass text messages and broadcast to huge audiences on social media for very little cost, whether measured in time, group size, or geography. To understand how Samoans' behavior matched with what technology allows, I worked with Samoan research and policy colleagues to undertake a national survey. It focused on where people get their news, the information sources they trust, and the information sources they act on during and after disasters such as cyclones. They had options for sources such as reporters, government officials, family, and local leaders, and mediums such as radio, TV, mobile phone, computer, and newspaper. If local actors are managing disaster response collectively at the local level using personal ICTs, then social media and mobile phones should be equally trusted as actionable sources of information in a communication environment where they can also listen to radio or watch TV.

### **Why Collective Action in Disaster Response Can Speak to Violence Prevention**

Collective action processes rely on effective, efficient communication. The problem is that when a group increases in size and geography the cost of keeping every member of the collective informed becomes significant. What ICTs do in this context is drive down the costs of communication even as the size of the collective

increases (Lupia and Sin 2003). ICTs help lower the costs of organizing, recruiting, and maintaining transparency in a variety of social and political activities. These activities could include disaster management, election monitoring, political organizing, or more nefarious activities such as organizing riots and violence. To manage a collective process, people need to have the ICTs to communicate, as well as the predisposition to trust and use the information they get from their ICTs enough to take action.

In order for there to be a collective action process, there also needs to be a public good. For the purposes of this study, I treat stability as the public good; as people are able to use ICTs to more efficiently manage access to water, food, and critical resources postdisaster, they are collectively maintaining social stability during a period of social stress. In order for people to effectively manage the key resources that keep communities safe and stable, they need to trust the information they get from a suite of sources and mediums enough to act on it. This level of trust is the primary variable in which I am interested.

Scholars question whether the collective action processes that ICTs enable are necessarily peaceful. Pierskalla and Hollenbach (2013) argue that indeed access to cellular phones makes the collective organization of violence easier. They use an econometric approach, analyzing events of violence as a function of access to mobile phones. Their strategy for determining access to mobile phones was to use the World Bank's quality of regulation score as an instrumental variable for access to mobile phones. Bailard (2015) also finds that ICTs make it easier to manage collective violence. Shapiro and Siegel (2015) note though that while ICTs can and do support the organization of violence, they can also be used by civilians to organize against insurgent violence. These studies indicate that ICTs are used as part of collective processes of organizing violence, as well as resistance to violence, but tend to focus specifically on mobile phones.

There are three general sets of technologies that I will focus on in this paper. These were selected because they are common in Samoa and are commonly covered in the literature on communications technology and peacebuilding. The first is mobile phones, which are both increasingly ubiquitous in the developing world and are used to support web-based services like social media. At a basic level, mobile phones operate by connecting to a network of transmission towers and then passing data from point to point through the towers. Individual phones are identified by the network with SIM cards, which are what tell the phone which network to transmit on and act as the phone's unique identifier. Samoans have high rates of mobile phone ownership and use mobile phones for a range of tasks. The primary use is staying in contact with family overseas, since SMS text messaging from Samoa to Australia, New Zealand, and the United States is much cheaper than voice calls. Samoans also use their phones to access Facebook; even those without smartphones have set up text-to-post services that allow people to post Facebook updates using SMS text messages.

Social media is the second technology I am interested in. Many people in crisis-affected contexts access social media through their mobile phones, so this technology has a relationship to mobile phone access. Facebook is quite popular across all age groups in Samoa, while Twitter lags behind in usership. IP chat services like WhatsApp and Snapchat are very popular among younger Samoans. Radio and TV are the third set of communication technologies I am going to be highlighting throughout this paper. Though these are listed third, they are not the least important. Radio in particular is still a major source of information in developing countries, and companies like FrontlineSMS that provide SMS text messaging services are building software applications that allow radio stations to aggregate and manage text messages sent in to live programs.<sup>3</sup> Radio can also be

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<sup>3</sup>For more on FrontlineSMS:Radio see: <http://radio.frontlinesms.com>. Accessed July 21, 2016.



picked up in places that digital transmission services like mobile telephony cannot reach. An average transmission range for a mobile phone tower is 50–70 kilometers depending on terrain and broadcast power; by comparison, AM radio broadcasts can be picked up thousands of miles from the broadcast center due their transmission frequency. Radio is very popular in Samoa, and Radio 2AP, the national AM broadcaster, is relied upon to maintain broadcasts during cyclones.

### Samoa: History and Place

Samoa is interesting because of the collective nature of its society and politics, as well as its comparative long-term stability in a region where its nearest neighbors, Fiji and Tonga, have dealt with political coups and bouts of antimonarchy violence (Tcherkezoff 1998). Given the unique political and social structures, such as family titles, land tenure rules, and the way that these traditional systems tie into the parliamentary system, patterns of trust and preferences for information could be oriented toward the local level, could rely on centralized information sharing, or could be a hybrid of locally sourced and nationally broadcast information.

The colonial history of Samoa began in 1830 when the London Missionary Society (LMS) landed on the western island of Savai'i and brought with them the Bible and written language (Meleisea 1987a). Much of the colonial history of the South Pacific revolved around Christian missionaries and shipping routes, a theme that we will see in our other two case studies. Between the arrival of the LMS and the takeover of Samoa by the Germans in the late 1800s, there was a considerable amount of unrest fueled by Western interests in the region (Meleisea 1987a). Germany became the sole colonial power in Samoa in 1899, when the United States was granted control over the eastern-most islands (now American Samoa) and Great Britain ceded control of Samoa in exchange for German renunciation to all claims on Tonga and parts of East Africa. The Germans were not particularly interested in intervening in local affairs and focused on exporting copra and coconut oil. During this time, Chinese workers were brought into the country to work on the plantations, many of whom stayed in Samoa and integrated into the population after Germany lost control of the islands after World War I (Meleisea 1987b).

In 1914, New Zealand landed military forces on Savai'i and overthrew the German leadership, effectively taking control of Samoa under the mandate of the League of Nations until 1962. The latter part of New Zealand's trusteeship saw the uprising of the Samoan population under the leadership of a collective of chiefs called the *Mau* in an effort to nonviolently gain independence from New Zealand (Meleisea 1987a). While these efforts were initially met with violent resistance from New Zealand's local administration, the *Mau* movement was successful in 1962. Samoa was the first island state to gain independence and signed a Friendship Treaty with New Zealand that year.

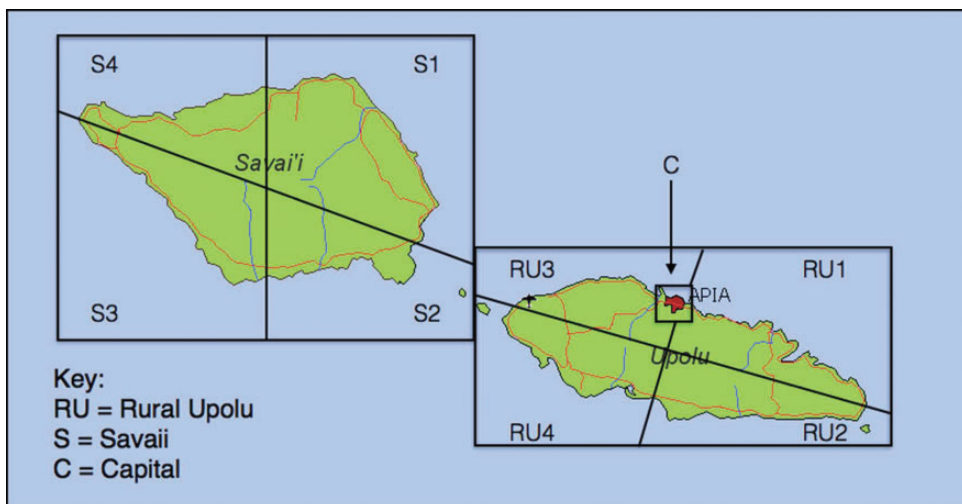
Samoa is unique in that it has retained a traditional land management mechanism called the *Matai* system, with land ownership tied to *Matai* titles held by families and bestowed on a family leader by vote (Holmes 1980; Meleisea 1987b; Hills 1993; Tcherkezoff 1998). In the *Matai* system, the family can choose to bestow the title on any person they choose. This could be a biological family member, although it is not uncommon for a popular or respected foreigner to be given a title (Tcherkezoff 1998). Titles can also be taken away if the titleholder does not meet the duties expected of them; this has ramifications not only for the family, but also at the government level, since one must hold a *Matai* title in order to run for and hold a seat in parliament. In modern Samoa, there is a unicameral parliamentary system that operates in parallel with the *Matai* system. Economically Samoa relies on a mix of remittances from expatriate Samoans, agricultural

exports, manufacturing, and development aid to keep its economy functioning. While Samoa's economy grew and modernized during the 1990s, it remains exposed to risks associated with natural disasters (World Bank 2012). While its economy performs well, it is vulnerable to external shocks such as Cyclone Evan in late 2012, which caused massive damage to the island's capital infrastructure.

Samoa presents a unique mix of local and national governance integration. While the *Matai* system creates local bonds within and between villages, it also creates a connection between the village and national government. In such a collective social system, people could easily eschew central information and rely on local information shared among family and friends using cellular phones and social media. Alternatively, since the government structure integrates the traditional family title system, there is reason for people to trust mass broadcast information; the strength of the Samoan government is very much rooted in the fact that the leadership is connected to their communities through their *Matai* titles. In a country where family-level politics track directly up to government leadership through traditional family titles, there are compelling reasons people can trust local information from mobile phones or social media, or national broadcast mediums like TV and radio.

### ICTs and Disaster Response in Samoa: Empirical Approach

To understand the levels of trust that Samoans have for different information streams, a survey was designed that contained three key questions: where do you get your news, what information sources do you trust, and what information sources do you act on during disaster response? Working with the Statistics and Computer Science Departments at the National University of Samoa, we created a sampling approach that gathered survey responses from both islands in Samoa. The two islands were divided into four regions each, with samples of 150 respondents taken in the capital region (C), 150 from rural Upolu (RU), and one hundred from Savaii (S). Enumerators were given a set of villages within each quadrant and went from one end of the village to the other, stopping at each household and surveying the adults in the household. Because the majority of villages in Samoa lie along the coastal ring roads (thin lines on the islands in Figure 1), enumerators traveled clockwise through a quadrant until they had



**Figure 1** Geographic survey sample distributions. Source: Wikimedia commons, with modifications by the author

collected the target number of responses. If they did not have enough responses after the first day, they repeated the process on the return trip, stopping at households missed on day 1. We collected a total of 400 surveys, with eighteen excluded in this analysis due to missing responses.

The advantages to doing a survey in Samoa are the small population size, the homogeneity of the population, and the linear population distribution. There were some challenges in the collection process. The enumerators had to make a special effort to collect responses from men in some areas since we were doing the research during the workday. This was solved by doing a follow-up round of surveys in each region on Saturday, when all household members were home. The capital district (C) required making sure that people actually lived in the capital area; because the country is so small, it is common for people to commute to the capital from all the “RU” regions. People who resided at least four nights a week in the capital district were considered residents, and their responses were tallied in the C sample. In all, the survey process took two weeks, with the help of ten enumerators and three faculty members from the National University of Samoa.

The range of possibilities for sources and mediums of information in the survey is based on suggestions from faculty in the department of computer science at the National University of Samoa, as well as input from the staff of the policy section in the Ministry for Communications and Information Technology (MCIT). Categories were selected to be easily translated and understood, for relevance in both rural and urban settings, and to be applicable for policy applications under development in MCIT. Respondents were prompted to respond to the questions based on their experience with the postdisaster recovery after Cyclone Evan, a Category 4 cyclone that hit Samoa in December 2012. Respondents could select more than one option from all of these categories, so it could have been possible that people selected all categories.

### Information Trust during Disasters: Results and Findings

While people acknowledged the information they received from social media and personal ICTs, the radio and TV remained the primary sources for news. TV broadcast is reliable on both islands, and the stations carry both local and New Zealand news. People also trusted centralized sources such as professional reporters more than they did friends and family.

**Table 1.** Preferred news sources by source and medium

<i>Preferred news sources</i>	
Professional reporter	78
Friends	59
Family/matai	51
Mayor	32
Government	28
Other	5
TV	93
Radio	89
Mobile phone/SMS	56
Newspaper	44
Internet	37
Other	2
<i>N</i> = 382	

Source: Author's original data

This pattern continued when people were prompted about what sources and mediums of information they trusted during disasters. People had a preference for centralized broadcast services, even as over 50 percent claimed they trusted information from family and mobile phones. As an emergency sets in and there is an increased need for very localized information—not just news about weather or national response—there is an increase in the trust placed on information from family and *Matai*, while trust in different mediums of information remains the same.

There is a noticeable set of changes in the responses when the question changes from trusting something to acting on it. The radio remains the most important medium when choosing to take action, with TV and mobile phones dropping off by 9 percent and 6 percent, respectively. Interestingly, when the time to take action arrives, there is a 9 percent increase in respondents who will act on information from their family, while the reliance on professional reporters decreases. This perhaps indicates that there are phases; during the lead-up to a disaster, one needs to trust the general information about preparations, but during and in the aftermath of the event people shift to taking action to manage problems in their immediate locality, with a corresponding shift in where information is gathered.

What remains interesting, though, is the value placed on centralized sources of information in all three sets of questions. If people are going to manage collective action problems through crowdsourcing or sharing information locally, we expect respondents to be more prone to reach out to neighbors and friends using cellular phones or social media, solving problems in a postdisaster setting at the community level. What the data indicate, however, is that while survey participants acknowledge the information they gather from friends and neighbors using social media or mobile phones, trust and action are still taken when information is heard on broadcast systems, especially radio. There are two explanations for this.

The first is habit. People have relied on radio and broadcast media for so long, and it has worked reasonably well; that it is the source they trust by habit. While they gather information from multiple sources and mediums, the officialdom and reliability of radio is what leads people to trust and act on it. The second reason is the reach and broadcast range of radio. If I am trying to make a decision as a participant in a collective process, then I need to know not only what is happening in my immediate vicinity or with my immediate friends and family, but also what is happening in the next community or region and what people in the next community or region know. Since radio covers a wide geographic space, what I hear on the radio is also probably what others are hearing in neighboring communities, especially in Samoa where there is only one AM radio station (after cyclones the FM stations often do not transmit). There is also a symmetry of information that comes with broadcast, which helps mitigate the possible negative effects of divergent, confusing, possibly contradictory information being shared on thousands of phones and social media feeds. The results indicate that personal ICTs such as mobile phones help people know what is going on in the environment around them and that crowdsourcing this data from different communities to improve broadcast media can help bridge information gaps between villages or regions in a way that people trust and will act on.

### **The Political and Geographic Economy of Information Sharing and Trust**

One aspect that is important to explore is the more granular reasons people may or may not trust information based on different experiences with the information provider, or the task that is being organized. An example of how specific experiences can impact trust in a source emerged in the qualitative data collected in eastern Upolu. While many of the respondents generally trusted the government

**Table 2.** Information sources and mediums trusted in emergencies

<i>Information trusted in emergencies</i>	
Professional reporter	82
Family/matai	54
Friends	45
Mayor	34
Government	32
Other	4
Radio	94
TV	80
Mobile phone/SMS	55
Internet	34
Newspaper	31
Other	2
<i>N</i> = 382	

Source: Author’s original data

**Table 3.** Information sources and mediums acted on in emergencies

<i>Information acted on in emergencies</i>	
Professional reporter	73
Family/matai	63
Government	44
Mayor	41
Friends	26
Other	4
Radio	94
TV	71
Mobile phone/SMS	49
Internet	24
Newspaper	19
Other	4
<i>N</i> = 382	

Source: Author’s original data

and radio, there was an interesting division in the results between the northeast since of Upolu (RU1) and the southeast side (RU2). There was a noticeable difference in qualitative levels of trust between respondents in RU1 and RU2, with respondents in RU1 describing a much lower level of trust in government and domestic mass communication, while respondents in RU2 had a very high level of trust in all information sources in comparison to other regions. There are a few layers of explanation to this, which have implications for the relationship between technology and information use and political geography.

There were two disasters on each side of the island that affected peoples’ trust in government information. In 2009, a tsunami destroyed much of the coastline in southeastern rural Upolu (RU2), and in December 2012 Cyclone Evan destroyed much of northeastern rural Upolu (RU1). In RU2, reinsurance from the government was issued quickly, and high-risk villages were moved uphill at government expense; people in RU2 claimed they experienced efficient, rapid support after the 2009 tsunami. In contrast, people in RU1 affected by Cyclone Evan noted in the surveys that the government had not provided reinsurance or promised rebuilding supplies. Many respondents had very negative views of the government and a lack of trust in information shared by the government. On the



surface, the basic fact that government services were not delivered had the effect of leading people to not trust information from the government delivered over broadcast platforms.

But there are two more aspects of political economy and geography worth noting when analyzing the differences in trust in government information in RU1 and RU2. The first is that RU2's political representation includes the Prime Minister (PM), who has served for two decades. This meant that when political capital needed to be spent to get reinsurance distributed and people moved uphill to new permanent residences, the region's political representatives were supported by the PM. This is important in Samoa, where the *Matai* system plays an important role in politics. Familial and political connections are very important when activating emergency or government services because government representatives are not only connected to constituencies by district, they are connected by *Matai* title. Many parliamentarians have political responsibilities to each other through the title system, as well as in the national government. By comparison, RU1 lacks the same level of political representation.

Physical geography feeds the political economy of postdisaster recovery assistance as well. RU2 is composed primarily of beaches with a long lagoon. There are dozens of large resorts and many smaller village-owned restaurants, all of which provide tax revenue to the government. RU1 lacks beaches and farmland and is particularly steep and rocky. There is limited tax revenue from this side of the island and not much tourist infrastructure. This likely has an impact on the speed with which the government provides reinsurance and supplies, and when those needs are promised but not met it has a negative impact on the population's overall trust in government messaging and information. For these reasons, respondents in RU1 noted that they relied on information sent by relatives via SMS and social media from New Zealand during periods of natural disasters and that the government's failure to deliver promised services diminished the reliability of government information.

What is important about these details from an information sharing perspective is the role that political-economic and geographic factors play in affecting how people choose to trust and act on information. Putting this in the perspective of ICT in disaster, what it indicates is that social and political factors play a significant role in shaping how people interact with technology and information during emergencies and disasters. Thus, while people will use information and technology to try to manage collective action problems during crises, their experiences of political and administrative processes have an effect on the values they place on different technologies and information streams.

### **Conclusions and Further Research**

One of the key policy issues facing the Samoan government at the time of this study was how to integrate ICTs and social media into their disaster response processes. Recognizing the gap in what we knew about citizen behavior, our focus as a research team was to gather a baseline of quantitative data about trust and information use that could help inform the government and speak to wider theoretical issues in crisis management and, by extension, conflict and violence prevention.

One of the interesting results was seeing how sources and mediums shifted in importance as peoples' answers moved from gathering news to taking action. In Samoa, it makes sense that when it is time to take action during or after a disaster, people would look to family networks since these are the primary social unit in Samoan culture. An assumption that I brought to the research environment after working in the technology sector was that people in collective, tightly networked societies would extend that social behavior to the digital space. While in many ways Samoans do that, people hold radio paramount within the information

environment they operate in when put in the context of trusting and acting on information. One of the policy recommendations that came out of this data was finding efficient ways to leverage the technologies that people use and trust for social interaction and integrating those into more traditional disaster management communication mediums. It would also be interesting to do another survey looking at the differences in trust based on the type of issue being responded to. Differences in information trust and action when responding to infrastructure damage, medical emergencies, or shelter needs could have policy value to the Samoan government, as well as indicating different levels and mediums of collective action and trust in various circumstances.

Further research on the political economy and economic geography of information trust could also be interesting. The responses in the survey about information preferences being driven by a lack of follow-through on the part of the government, and the correlation of these responses with the economic geography of eastern Upolu island, is a theme that would be interesting to revisit through deeper qualitative research. It is also a theme that can be applied to other countries, especially larger ones where populations are spread across wider terrain and there is more variance in political culture.

This paper provides a snapshot of one small island's challenge with using ICTs to maintain stability during periods of social stress. The survey approach draws on the experience of other practitioners who have implemented crowdsourcing programs with varying degrees of success and provides an analysis of how people gather, trust, and use information from different sources and mediums in Samoa. This model could be replicated in conflict-affected locations to help establish baselines for public participation in ICT-supported peacebuilding and violence prevention, helping practitioners engage more effectively with local populations and providing researchers with better data on the local information ecosystem when doing technology-supported research.

## The Practicalities and Ethics of Mobile Phone Surveys in Conflict-Affected Contexts

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The potential problems of conducting research in deeply divided and conflict-affected societies are reasonably well known among research communities (Smyth and Robinson 2003; Sriram et al. 2009). Controversial cases crop up from time to time (Hayes and McIntyre 2014; Marcus 2014), as do tales of insensitivity and data harvesting by some researchers. Overall, however, there is awareness by many researchers on issues of positionality, conflict sensitivity, and ethics (Henry, Higate, and Sanghera 2009). There has been a turn toward more human and humane approaches to the study of conflict-affected communities, with anthropological, sociological, and microstudies achieving significant traction in the academic literature (Millar 2014). Yet, at the same time, technology offers a number of opportunities previously unavailable to researchers. Through the use of technology, researchers can potentially overcome a series of problems related to access, cost, rapidity of data collection, and scope of data analysis.

This article focuses on the potential tensions between calls for a more human and humane approach to peace and conflict research on the one hand, and the opportunities offered by technology (particularly mobile phones) on the other.

The article draws on an ongoing research project, the Everyday Peace Indicators project, led by the authors, but also draws more generally on a wider literature on the methodologies and epistemologies of contemporary research. In its first section, the article looks at the trend toward the humanizing of research, whereby more ethnographic methodologies have been deployed to capture apparently “authentic” bottom-up dynamics. The second section looks at the promise of technology for research processes and is followed, in the third section, by a more specific focus on mobile phones as research tools in conflict-affected areas. This section draws on the experience of the Everyday Peace Indicators project in South Africa. The fourth section examines the compatibility of mobile phone surveys with ethnographically influenced research.

### Humanizing Peace and Conflict Research

Clearly the social sciences constitute a broad field and many methodologies: qualitative, quantitative, and mixed. Fundamentally, though, the notion of the social sciences is based on ideas of abstraction, generalization, and the application of ideas and practices from the natural sciences to the study of society (Feagan 2007, 30). Hence, over time and across disciplines, we have seen the use of aggregate data and large-N studies that seek to observe generalizable patterns (Regan 2013, 183). Quantitative and econometric research has been particularly popular in the study of peace and conflict, and, from modest origins, looking at the correlations between arms expenditure and warfare (Richardson 1960), it has spawned into a highly sophisticated field based on multiple data sets.

Critics of quantitative and econometric approaches to the study of peace and conflict have aired skepticism over the quality of data gathered from conflict contexts (Cramer 2002) and the dangers of how a single-minded pursuit of data risks overlooking the very real and human aspects of communities under conflict (Pugh 2007). While conflict scientism continues to develop, there has been a discernible epistemological turn among many researchers to bottom-up, crowdsourced, and ethnographically influenced perspectives. This turn is in keeping with developments in the policy and political worlds, in which conflict response actors (international organizations, donor states, international nongovernmental organizations or INGOs, etc.) have developed more sophisticated understandings of conflict complexity (Freitas and Lethem 2016). The trend toward multidimensional conflict responses that encompass development and identity issues as well as security and constitutional issues is evidenced by an increased focus in the policy world on sustainability, local participation and ownership, inclusivity, and legitimacy. Presaged by the mainstreaming of human security and a generalized understanding that remote top-down peace and statebuilding were delivering poor results, a number of initiatives manifested this turn to the local in the policy world. Prominent among these has been the 2011 “New Deal for engagement with fragile states”—reached between the G7+ group of conflict-affected countries and the OECD. It noted the need to move away from “providing aid in overly technocratic ways that underestimate the importance of harmonising with the national and local context” (International Dialogue for Peacebuilding and Statebuilding 2011).

The policy interest in local perspectives has been reflected in the research community with a discernible trend in political science and international relations toward ethnographically influenced work that seeks to capture finer-grained, “authentic” data. It is worth stressing that anthropological studies of conflict have a long and influential heritage (Harris 1972; Darby 1986; Nordstrom 1997; Moser and McIlwaine 2001). What does appear novel, however, is the scale of the turn toward the local and the bottom-up and how it is moving beyond anthropology (Mac Ginty and Richmond 2013). At the extreme end of the spectrum are

experiential studies of conflict and violence that purport to understand the feelings and experiences of those affected by conflict (Sylvester 2010, 2013). More convincing are studies drawing on auto-ethnography (Brigg and Bleiker 2010) and narrative (Cobb 2013; Dauphinee 2013; Kappler 2013, 2015) that have sought to narrate and give voice to those involved in conflict.

This humanizing of the study of conflict and violence is in keeping with a theoretical consensus among many scholars on the efficacy and desirability of participative approaches to dealing with conflict. Conflict transformation (as opposed to conflict management or resolution) is widely regarded as the most comprehensive and sensitive approach to conflict. It advocates addressing conflict causes rather than merely manifestations. Thus it places emphasis on education (interpreted broadly) and self-awareness as a first step in addressing conflict. It hypothesizes that only by knowing what factors contribute to our own identity can we begin to contemplate thinking about reconciling with others. Conflict transformation is a relationship-focused approach that relies on patience, emotional intelligence, identity, and a transcending of exclusive categories such as nation or statehood. Fundamentally, conflict transformation relies on human affective qualities of empathy, trust, perception, imagination (Lederach 2005), communication (Burton 1969), and telling (Goffman 1956).

The more human-centric focus in peace and conflict studies is not limited to bottom-up studies, and we should be careful not to conflate the local and human as though there is an inherent link between the two. Top-down studies, for example, on aid workers' security (Fast 2014) and intergroup insults (Korostelina 2014) reveal a focus on the human across peace and conflict studies. In *Aid in Danger* (2014), Fast critically examines the causes of violence against aid workers and the consequences of the approaches aid agencies use to protect themselves from attack. In *Political Insults* (2014), Korostelina offers a novel framework for analyzing the ways in which seemingly minor insults between ethnic groups, nations, and other types of groups escalate to disproportionately violent behavior and political conflict. Therefore, the turn to the humane is not limited to beneficiaries and victim-survivors of conflict, but also exists in elite-level studies of peace and conflict.

This move toward “the human” in the study of peace and conflict now stands at a critical juncture in which technology offers new—more efficient, cost-effective, and safer—ways of conducting research. Potentially, then, there is a risk of contradiction whereby the human-centric and conflict transformation ethos of many in the research and practitioner communities is confronted by technological imperatives that place technology in the interface between the researcher and the researched, or between individuals and groups from opposing camps who may be edging toward reconciliation. The possible danger of a technological turn is that research or conflict transformation mediated by some forms of technology loses the finer-grained detail and affective dimension that can convey a fuller understanding of conflict. Without such an understanding, there is a risk that ameliorative actions and interventions are misplaced.

### The Promise of Technology

Technology, whether photography (Callister 2007; Ferenback and Rodogno 2015), battlefield body density mapping (Hughes-Wilson 2014, 244–47), statistical analysis software, or audio-recording, has traditionally been incorporated into research processes and indeed practical approaches to conflict and disaster (Jacobsen 2015, 132). The pace and qualitative nature of technological development means, however, that technology promises to confront, and possibly overcome, a number of problems facing academic and policy researchers. These

problems involve access, security, time, cost, and the ability to comprehend large and complex data sets.

To take these issues in turn, conflict-affected areas most obviously present access and security issues, with spaces and communities being off-limits because of physical dangers and the increasingly risk-averse nature of universities, international organizations, and INGOs. Technology—for example, the surveillance drones and remote mapping technologies used by the Satellite Sentinel project in Sudan—offers the advantage of “seeing” conflict-affected areas without endangering personnel (Daly 2013). This advantage is worth placing in the context of the apparent bifurcation of many conflict zones with notions of neutrality and impartiality under threat. Whether peacebuilding and humanitarian personnel have actually been under greater threat in recent years is subject to debate (Hammond 2015, 95), but what is clear is that bilateral donors, international organizations, and INGOs have engaged in a bunkerization and securitization of their activities with the result that they are often physically removed from the populations they are charged with ministering to (Duffield 2012; Tschirgi 2013; Smirl 2015). Technology, therefore, offers an obvious way of collecting information and dealing with people and their problems without endangering personnel.

Potentially, technology also offers to obviate temporal issues by shortening the data gathering and analysis processes and enabling data gathering to take place simultaneously in multiple locations. While technological approaches to data gathering and propeace interventions involve some financial outlay, they can be cost effective. This is especially the case in personnel savings, but also because software and analysis companies have spotted a niche in the market for humanitarian and third sector information systems and have developed packages tailored to this sector.

Perhaps the most significant advantage offered by new technologies in the peacebuilding field is the ability to collect, analyze, visualize, and otherwise disseminate large amounts of data. In some cases, data may be crowdsourced from inhabitants of conflict-affected areas, and in others it allows for bottom-up information to be fed into negotiations and policy processes (Hattotuwa 2013, 2). A significant number of initiatives have sought to utilize technology to gather timely and accurate information. Peacebuilding.org, for example, “features analysis and data from large-scale population surveys in countries affected by mass violence and aims to bridge the gap between peacebuilding work as intended by policy makers—and its perception and implementation on the ground” (Peacebuilding.org 2015). The United Nations Global Pulse initiative, arising out of the High-Level Panel on the Post-2015 Development Agenda, recognizes big data as “a new, renewable natural resource” and aims to “accelerate discovery, development and scaled adoption of big data innovation for sustainable development and humanitarian action” (United Nations 2015). Arguably, “peace, justice and strong institutions” was chosen as goal 16 of the United Nations Sustainable Development Goal because it is now widely seen to be measurable using the Global Peace Index, among other measures.

It is worth noting that technological advancement per se, is not enough (Read, Taithe, and Mac Ginty 2016). What is needed additionally is the cultural conditions in which technology is adapted and legitimized into research processes. In relation to use of new communications technologies in sudden-onset disaster response, Garman notes that “the pervasive attitude is one of optimism, bordering on technological determinism, which champions the transformative potential of communications technology; assumes the synonymy of innovation and increased effectiveness; and urges organizations and aid workers to get on board, or get left behind” (2015, 440). Also in a critical vein, Duffield notes how “the turn towards net-based cyber humanitarianism is occurring at the same time as the physical retreat of aid managers into secure gated compounds” and how “hypermedia



solutions...open much current in-country humanitarian infrastructure and expertise to redundancy” (2015, 33). The chief criticism of much technological advocacy in relation to peace and humanitarianism is that it is supply rather than demand driven (Beerli and Weissman 2016, 71–81). It is a “solution” that more fully addresses headquarter needs (risk aversion, cost-effectiveness, an audit trail of data) than the demands or needs of those in conflict-affected domains.

To be fair, many commentators have avoided unalloyed technological optimism. They have mainly been guarded in their analysis, with Larrauri and Kahl (2013, 2) highlighting the connectivity bias of reliance on digital communications. Even within relatively poorly connected communities, access to digital communications is likely to be affected by gender and age. Muggah and Diniz (2013, 4) note how social media activists have been targeted by unsympathetic regimes, while Mancini and O’Reilly (2013) question the assumed universality of technology, arguing instead for the adoption of context-specific technology.

So far, this article has highlighted two possibly contradictory trends in research on peace and conflict. On the one hand, there is a growing scholarly, and to a certain extent policy, awareness of the need for humane, people-centered approaches to dealing with conflict in keeping with the relationship focus of conflict transformation. This is also reflected in many aspects of research into conflict-affected communities, with an increased awareness of the need for conflict-sensitive research tools that are capable of bottom-up and subnational detail. On the other hand, new technologically driven research possibilities are opening up that promise advantages in terms of cost, speed, and analytical reach. Yet some of the newly available research technologies emphasize remote data gathering and risk contradicting the person-to-person ethos of conflict transformation. In a sense, face-to-face may be replaced by face-to-screen and the essence of conflict transformation may be lost. The next section critically examines this possibility with specific reference to the use of mobile phones in research in conflict-affected contexts.

### Mobile Phones as Research Tools in Conflict-Affected Areas

Mobile phones have a long-established positive role in conflict early warning. Community leaders along the “peace walls” in Belfast have had a mobile phone network for many years to warn each other of rising tensions (Hamilton 2001; Hall 2003). Similar early warning/ceasefire monitoring schemes have been used to good effect in Mindanao (Wörtz 2005) and Kenya (Martin-Shields and Stones 2014, 52). In terms of research, mobile phones can be utilized in a number of ways in developing contexts as the rate of mobile phone availability in the Global South continues to grow. In 2013, 63 percent of inhabitants on the African continent owned a mobile phone with an active subscription (ITU 2013). Mobile phones have become a part of everyday life for 91 percent of South Africans (Pew Research Center 2014). The spread of mobile phones has allowed researchers interested in community-based knowledge to see the potential of this technology for data collection in seemingly inaccessible areas. Previous mobile phone studies have been conducted across the continent in South Sudan, Tanzania, South Africa, Uganda, Central African Republic, and Liberia, as well as in Latin America and Asia (Pham et al. 2005; Tomlinson et al. 2009; Dillon 2012; Demombynes, Gubbins, and Romeo 2013; Peacebuilding.org 2015).

The Everyday Peace Indicators project is a longitudinal study that gathers data to track change over time. Surveys are repeated several times to be able to track whether or not people’s perceptions of peace and safety in their communities have changed. Since the mobile phone surveys are conducted in sensitive and sometimes highly dangerous contexts, we have not always had access to communities like ordinary surveys. Mindful of Chambers’ (1997) warning against simply conducting research on

the basis of convenience for the researcher, we sought to include areas that were difficult to access (Mac Ginty and Firchow 2016). Therefore, in order to circumvent this, we integrated different survey modes depending on each particular context. Telephonic interactive voice response (IVR) as well as simple voice call surveys delivered by field workers are being used in highly fragile environments where it is too dangerous to send enumerators or field workers out into the community, and mobile application surveys are conducted in areas where there is little mobile phone reception or penetration. Finally, a hybrid approach using both voice calls and mobile application surveys is being used in more stable contexts with high rates of mobile phone diffusion and network reception. In each of the three survey modes, the questions were generated by the community through a series of focus groups and participatory action research methods. Survey participants in the communities were asked to answer questions on a 1–5 Likert scale: (1) never, (2) rarely, (3) sometimes, (4) often, or (5) always. All participants, regardless of survey mode, are provided with a printed Likert scale card, which provides visual representation and local language translation of the possible answers.

Some of the challenges, as well as the benefits explained above, when working with technology in conflict-affected contexts were encountered by the Everyday Peace Indicators project research team. One illustrative example is our pilot project in Hanover Park, Cape Town, South Africa. Hanover Park is a southern suburb of Cape Town in what is known as the “Cape Flats,” an area where many of South Africa’s colored and black Africans were relocated during Apartheid. These areas have deeply entrenched and powerful gangs that began to gain power in the 1980s nurtured by the instability created by social dislocation and related organized crime, drug trade, and other illicit activities (Jensen 2010). Hanover Park is a primarily colored community (93.7 percent - mixed race) with approximately 40,000 inhabitants who speak mainly Afrikaans and have an average household income of \$5,500 (Statistics South Africa 2012). Gang violence is a palpable problem in Hanover Park: according to the Philippi Police Station, which also serves Hanover Park, sixty-one people were murdered in 2014 and seventy-four in 2015 (up from seventeen in 2010; Institute for Security Studies 2016). Gangs such as the Americans, Junky Funky Kids, Laughing Boys, Ghetto Kids and Fancy Boys, Corner Boys, Mongrels, and Wonder Kids territorialize blocks of three-story flats (known as “courts”) where most of the violence is concentrated. There have been multiple attempts at interventions to stabilize the gang violence, including a failed attempt at bringing in the Army by the Premier of the Western Cape in 2012, an ongoing attempt at bringing the ceasefire model from the Southside of Chicago to Hanover Park, and a new initiative to track shots with the Shotspotter gunfire detection software. The system uses sensors, audio detection software, and location data to alert police via SMS if gunshots are detected in a predetermined area.

Since the security situation in Hanover Park was so volatile, we did not feel comfortable sending staff into the community to conduct face-to-face surveys. In order to circumvent this obstacle, we used mobile phones to reach community members. The use of community volunteers for random mobile phone number collection followed by simple voice call surveys allowed us to obtain a stratified random sample of the community since mobile phone ownership and accessibility is quite prevalent in the area. By using community volunteers from the courts, we were able to collect a random sample representative of their own neighborhood. One volunteer noted in her field notes:

Although participants agreed to terms and conditions, concern was expressed about liabilities to participants in the field. Hanover Park is undergoing extreme periods of violence. . . . For most of the afternoon there was sporadic gunfire all over the courts. In this ongoing cycle of violence, there is no one given area of violence. The shooting is happening in all areas. People are fearful to move in other spaces not

near to their homes. Anyone not known to be from one particular area is always suspect.<sup>4</sup>

In order to create a stratified random sample in Hanover Park, we started by isolating blocks on Google Earth and in consultation with our civil society partners in order to determine how many courts/blocks were in Hanover Park. We established that the number of courts was approximately twenty-eight three-story buildings, where each had about sixty households with an average of ten people each. These are interspersed with a much larger number of individual household single-story brick houses with generally large fenced-in yards. We then randomly selected five of these courts and single-story brick houses, paying special attention to selecting areas with minority groups such as blacks or foreign nationals. However, once this was done, we found that we were limited to work in areas where we could find a volunteer willing to randomly collect mobile phone numbers. In order to find and contact these volunteers, we worked with two South African civil society organizations: the Institute for Justice and Reconciliation (IJR) and Community Action toward a Safer Environment (CASE). The volunteers/field workers were divided across different geographic sections of the community where some of the sections had courts and some did not. This included areas that had minority groups spread out across the sections.

Once the areas were determined, volunteers were dispatched with instructions on how to collect phone numbers. Volunteers randomly selected a direction to follow and then selected every second household as a response category. They then entered the household and, after introducing our project and explaining their business, they randomly selected an adult member of that household to participate in our survey. After gaining consent from that adult, they recorded the individual's mobile phone number. The mobile phone numbers were then brought to the research team in order to prepare for the mobile phone surveys, which were conducted over a six-day period using a mobile data collection application to assist the field workers in the survey collection process.

Although this process has allowed us to reach some hard-to-access populations to collect survey data, we encountered some additional hurdles along the way in Hanover Park. First, obviously, there was the issue of cell phone accessibility. The field workers encountered households that did not have access to a phone, and therefore the selected household could not participate in the survey. However, this was rare and was not the main obstacle to collecting the data. The main obstacle was the lack of face-to-face contact between the research team and the population. Two reasons contributed to this: First, we were not able to collect any data beyond the phone numbers and notes from field workers, and therefore there was little "thick description" of people's circumstances or their experiences. Some of the field workers took notes to give some more context to the indicators (barking dogs appeared as an indicator for some communities in the pilot), for example this one:

Her son's pet dog saved her young daughter's life by standing between the gunman and his intended target—the little girl would have been shot had it not been for the barking, protective dog.<sup>5</sup>

Second, because the researchers were unable to collect the data in person, there was less importance placed on the project in the eyes of the participants. For example, in an area of Hanover Park called Newfield's Village, volunteers were not able to secure any phone numbers because people did not want to be involved in something that did not extend further than just a survey. Also, some

<sup>4</sup>Field notes, Field worker 1, Hanover Park, South Africa, October 31, 2014.

<sup>5</sup>Field notes, Field worker 1, Hanover Park, South Africa, October 31, 2014.

foreign nationals did not want to participate in the data collection because they felt they could not participate without consent of their employer. Perhaps this would have been mitigated if research team members were physically present in order to give reassurance. Interestingly, the younger volunteers had a much easier time collecting numbers than the older ones.<sup>6</sup> Finally, and most importantly, volunteers were working under pressure and stress because of fighting and gunshots in the streets. This was mentioned by all the field workers in their notes, for example:

We had two people killed in the backstreets while we were busy in Smoti Town. We managed to collect the target amount of telephone numbers set (25). We walked home in a panic. As we headed to the area where we live, we heard gunshots close by. Another killing in the Hell [area of Hanover Park].<sup>7</sup>

The advantages of using mobile phones for this research are many and should be considered in light of some of the contextual factors mentioned in the section above. We found mobile phones to be reasonably cost-effective, easy for survey enumerators to use, and compatible with Geographical Information Systems. Relatively unsophisticated phones could be used for our purposes. The surveys could be translated into local languages, and data could be sent to the project team in real time. Given that the Hanover Park survey was part of a much larger project involving different localities in three other sub-Saharan countries, the use of mobile phone-mediated surveys allowed methodological consistency across the project. The use of handsets meant that survey enumerators could not skip questions, and there was no risk that survey sheets would go missing or become ripped or illegible. A number of commercial survey and marketing organizations have noticed a niche in African contexts for mobile phone surveys and so have developed software and expertise in organizing phone surveys. The Everyday Peace Indicators project was able to benefit from this prior expertise.

### **The Compatibility of Mobile Phone Surveys and Ethnographically Influenced Research**

While mobile phones do offer a number of research advantages, these have to be weighed against the possibility of mobile devices contradicting the person-to-person and conflict-sensitive dimensions of ethnographically influenced research. The emphasis in conflict transformation on relationships, understanding, and emotion does not immediately lend itself to machine-mediated research. Survey research via mobile phone is unlikely to be able to capture many of the contextual details that enrich research. Some details may be captured, for example, by GPS location or meteorological conditions, yet these would be very different from those captured by the human eye and recorded in a fieldwork diary. Human survey enumerators, if properly briefed, will be able to collect contextual data that can socially situate the research.

Face-to-face research offers the advantage of allowing the researched to gauge the bona fides of the interviewer or survey enumerator. This is particularly important in relation to sensitive research topics in conflict-affected societies such as Hanover Park. In some circumstances, interviewees and respondents may be more comfortable responding to questions from someone from their own identity group or of a similar gender. In other circumstances, outsider impartial interviewees may be an advantage. The key point is that in-person interviews and surveys allow the research subject to make a decision based on seeing and listening to the interviewer. Often, an interviewer-interviewee rapport has to develop over

<sup>6</sup>Field notes, Field worker 2, Hanover Park, South Africa, October 30, 2014.

<sup>7</sup>Field notes, Field worker 2, Hanover Park, South Africa, October 31, 2014.

time, with the interviewee evaluating whether an interviewer is trustworthy and the research project valid. Mobile phone interviews and surveys do not offer this option. While the person, recording, or text message that initiates the interview or survey may explain their identity and purpose, without actually seeing the person a level of reassurance and urgency may be missing.

Relatedly, there is also the danger that mobile communications are intercepted by state or other forces. In some contexts, the act of taking part in research, and possibly the answers that respondents give, may be interpreted as being disloyal or subversive. An atmosphere of suspicion is common in conflict-affected societies and thus potential research respondents may feel that it is unwise to participate in mobile phone-mediated research in which there are few guarantees that a third party may not be observing or listening.

Perhaps the most serious charge that can be made against research via mobile phone in conflict-affected areas is that research of this nature may lack the affective dimension that is required to ensure that research is not offending or even retraumatizing the research subject. In order to pick up on such signals, the researcher will most likely have to be present with the researched and be aware of nonverbal or nontextual signals such as tears or a reticence to discuss certain issues. This is not to say that all person-to-person research is always conducted with the utmost sensitivity or that all researchers will be skilled enough to recognize the (potential) hurt being done to respondents via the research process. But at least face-to-face research leaves open the possibility that the researcher can identify where offense may be caused to the researched.

Fundamentally, ethnography relies on access to people and their authentic perceptions and behaviors. While mobile phone surveys do suffer limitations as research tools, they can also offer advantages in accessing the sorts of information ethnographers seek. An important advantage comes in the form of offering a way to avoid gatekeepers who may want to control block participation in research or control the narrative. Gatekeepers may want to protect the image of a particular political party or movement and ensure that its preferred narrative is privileged. Mobile phone surveys give an element of protection to survey respondents in that they can respond on their personal device, without necessarily sharing their opinions on their doorstep. Sociological studies have shown how mobile phones are often private, almost intimate, physical objects: kept in close proximity of the person, often within reach (Milhailidis 2014). Personally owned mobile phones may allow respondents to participate in surveys using a device they are familiar with, at a time that suits them (for example, when alone and out of earshot/sight of a family member), and in a place of their choosing (café, bedroom, etc.).

### Conclusion

This article has sought to weigh the pros and cons of using mobile phones as a research tool in relation to conflict-affected societies. Our experience has been that mobile phone-mediated research can be justified, although clearly this is context dependent. We are aware of the need for conflict-sensitive and people-centric research techniques and thus leaven our advocacy of mobile phones as research tools with caveats. We recognize that the mobile phone does not instinctively sound like a key element of the ethnographer's toolkit and are skeptical that "ethnographic information systems" or mobile phone apps that claim to emulate "an ethnographer in your pocket" (Ethos 2015) can replace the sensitivities of a skilled ethnographer who can emotionally engage with the research subject.

At the same time, there is a danger that we romanticize all person-to-person research. Human researchers can be insensitive, culturally unaware, and emotionally limited. Face-to-face research can be so risky that field workers are reticent to collect data, therefore creating a data vacuum in conflict-affected contexts. Our



experience, from a research project that operates in multiple conflict-affected localities, is that a mixed-methods approach is appropriate, with the research methodology modulated to suit the context. Mobile phones can play a role here in contributing to the physical security of enumerators and respondents and in giving respondents the space to answer questions, albeit remotely.

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