

RESEARCH ARTICLE

In Search of Local Knowledge on ICTs in Africa

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This article explores whether, and to what extent, local knowledge features in research on the role of ICTs in statebuilding and peacebuilding in Africa, with a particular focus on neighboring Somalia, Kenya, and Ethiopia. We question whether the claims of the transformative power of ICTs are backed by ‘evidence’ and whether local knowledge – e.g., traditional mechanisms for conflict resolution – is taken into consideration by ICT-based development initiatives. To assess this, we systematically reviewed literature in the region, focusing on academic outputs as well as research published by non-governmental and governmental organizations. Several key findings emerged, including: 1) empirical evidence on the successful use of ICTs to promote peacebuilding and statebuilding is thin; 2) few differences exist between scholarship emanating from the Global North and from Africa; and 3) overall, the literature exhibits a simplistic assumption that ICTs will drive democratic development without sufficient consideration of how ICTs are actually used by the public.

Introduction

New information and communication technologies (ICTs) have been hailed as important tools for encouraging economic development, promoting peace, and improving the effectiveness of government in developing and conflict-affected regions. International actors, including the United Nations (UN),

the World Bank, and the International Monetary Fund (IMF), have emphasized the potential for ICTs to move the good governance agenda forward by increasing accountability, transparency, and citizen voice. But what evidence is there that the tools are delivering on these claims? What does the existing research and literature tell us about the real, rather than the aspirational, role of ICTs in peacebuilding, statebuilding, and governance in Africa?

Much of the current discourse on the potential of ICTs for governance in Africa make conclusions both about how ICTs *do* work to promote the governance agenda and how they *ought to* work – assumptions typically defined by actors from the Global North.¹ Despite efforts to emphasize ‘African solutions to African problems,’ debates on statebuilding and peacebuilding have been

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largely dominated by these actors in terms of setting policies, and on a theoretical level, in terms of trying to understand and explicate the role of ICTs and ICT users in achieving development goals.

This literature review attempts to address this potential disparity between perspectives from the Global North and Africa. Using existing analyses of ICTs, this review seeks to understand whether there are 'local perspectives' and 'local knowledge' that are overlooked (or perhaps dismissed) by researchers. In addition, the review documents the evidence and assesses the basis for claims made, offering insight into the current state of the field and building on previous work looking at evidence around media and conflict (e.g., Schoemaker and Strelau 2014). The countries that are the focus of this article, Kenya, Somalia, and Ethiopia, offer a comparative perspective on different approaches to ICT usage. Kenya is widely seen as an 'innovation hub' with heavy private sector involvement, ICT development in Ethiopia has been largely government-led, and in Somalia there is a thriving ICT sector despite the long-term conflict.

Identifying the literature

In order to identify disparities and overlaps between perspectives from the Global North and from Africa we gathered literature in two stages. A first search was run by the Center for Global Communication Studies at the Annenberg School for Communication, University of Pennsylvania in three major scholarly databases (EBSCO, First Search/OCLC, and JStor) as well as Google Scholar. It focused on research on Ethiopia, Kenya, and Somalia, and used the keywords: ICTs; information; communication; new media; online; mobile phones; Facebook; internet; SMS; e-government; e-governance; governance; democracy; service delivery; accountability; statebuilding; civic participation; civic engagement; peace-building. A second search was then carried out by the Collaboration on International ICT Policy for East and Southern Africa (CIPESA), in Uganda,

with the aim of capturing research emerging specifically from Africa.² This second search included not only journal articles but also gray literature from public bodies and non-governmental organizations, as well as PhD and Master's theses from political science and ICT departments in Eastern Africa. For both searches, studies that did not feature empirical evidence were excluded. Together, these two searches resulted in 85 empirically based articles. Of these, 34 articles featured an African lead author, 41 featured a non-African lead author (usually American or European), eight listed no author but were produced by institutions based in the U.S. or in Europe, and two were produced by one institution based in Africa.

Identifying local knowledge

Operationalizing the concept of local knowledge is a challenge. This literature review is part of the initiative 'Eliciting and Applying Local Research Knowledge for Peacebuilding and Statebuilding,' which emerged from the collaboration between the International Development Research Centre (IDRC) and the Carnegie Corporation of New York (CCNY).³ This initiative recognizes that many of the original insights, paradigms, and motivations for the concepts of peacebuilding and statebuilding have come from the Global North and that Northern institutions have retained 'ownership' of knowledge in these areas, often overwhelming Southern voices. It thus aims at eliciting, giving greater visibility to, and applying local knowledge, which it approximates as research, scholarship, or policy analysis produced 'on Africa by Africans' based either in Africa or abroad.

An advantage of this definition is that it includes scholars belonging to the vast African diaspora. But the definition also comes with shortcomings. First, it excludes the large wealth of knowledge on peacebuilding and statebuilding that has been produced by non-African academics who have committed their careers to study, for example, mechanisms of healing and reconciliation, or methods through which states

in the making have struggled to become progressively institutionalized or to co-exist with a variety of actors that insist on the same terrain. The second problem with this definition is that it neglects the fact that African scholars writing on Africa may overlook local knowledge and rely on other forms of knowledge as reference points. This, as we will show, is particularly evident in the case of technologies such as ICTs, which come with overwhelming promises about their potential, and encourage looking outward, at centers of innovation, rather than inward, at locally available solutions. Finally, and as part of a wider critique made by African scholars towards academic institutions in their own countries, research agendas in African universities and other institutions have often been influenced by dependence on resources disbursed by donors and NGOs based in the Global North, which has forced academics to fit into frameworks emerging from those countries (See Williams 2012; Zeleza 2003).

In order to respond to these challenges, in addition to our efforts to capture local knowledge in terms of authorship as indicated in the previous section, we also evaluated the extent to which any of the studies, regardless of the author, included evidence that draws on previous experience and makes use of institutional elements that have been employed locally in the past, interpreting them as a resource rather than as an obstacle to overcome. As Shivakumar argued, 'successful institutions draw on the popular concepts of what is right and proper that are contained in local cultural "repertoires." Typically, however, they do so in a way that requires adaptation by, but not the supplanting of, the practices and standards of the modern state' (2005: 105).

When the selected articles and reports were analyzed based on authorship, little difference could be found between scholarship coming from within or outside Africa. When articles were analyzed based on use of knowledge emanating from local processes, institutions, traditions, or experiences, little research was found (either emerging from

Africa or beyond) that embraced 'the local': the literature generally emphasizes the ability of technology to transform societies and, adopting a hopeful and normative tone, overlooks local processes of statebuilding and peacebuilding.

The next sections present these findings in greater detail, focusing first on the literature on 'ICTs and statebuilding' and 'ICTs and peacebuilding' separately, and then identifying shared characteristics. It concludes by arguing that future research should be focused on what users actually do with ICTs and how they combine them with other (and perhaps more traditional) forms of communication, rather than simply focusing on their assumed transformative potential.

ICTs and statebuilding

Definitions of statebuilding in the field of ICT and development tend to refer, implicitly or explicitly, to the ability of a government to maintain a monopoly of force and strengthen its capacity to function and deliver public services. Documents such as the World Bank's influential 'World Development Report 1997: The State in a Changing World' (World Bank 1997), were among the first to create a link between ICTs and statebuilding, defining the transformation that ICTs could bring to the statebuilding process as closely aligned with the reinforcement of a bureaucratic state: one that is 'responsive' to citizen needs, is 'transparen[t],' and 'lessens the distance between government and the citizens and communities it is intended to serve' (World Bank 1997: 11).

Definitions like this have become even more normative over the years, and, while our search included articles and other documents that adopted this formal understanding of statebuilding, we also considered less orthodox approaches. We adopted a more expansive definition, not limited solely to the improvement of the functioning of a government, but also one that accounts for a variety of actors providing services, such as healthcare or education, which normative models of governance typically ascribe

to governments. This hybrid approach to statebuilding and governance builds on the work of African studies scholars (e.g., Boege et al. 2009; Booth 2011; Gagliardone 2015; Meagher 2012), and includes religious organizations, NGOs, and the private sector, among others. As the findings in the following sections illustrate, very few scholarly works looking at ICTs adopt such an expansive conception.

The findings in this literature are roughly divided into two categories: top-down initiatives to improve government and state effectiveness and bottom-up initiatives that tend to be driven by the demands of users and citizens as ways of enhancing citizen 'voice' and participation.

The majority of articles tended to be *top-down* and emphasize the potential for ICTs to improve statebuilding, governance, and accountability, for example claiming that ICTs 'support public participation, simplify information flows & increase transparency while reducing corruption' (Relhan et al. 2011: 11) or promote 'evidence-based advocacy...by opening up government data on budgeting and project implementation' (DANIDA 2012: 4). Many of these articles touted the benefits of ICTs for service delivery, from government news and information updates to law enforcement and safety, and governments were often presumed to be the natural suppliers of services. Mbarika and Byrd (2009), Relhan et al. (2011), Yonazi et al. (2012), and Hare (2007) all used surveys with experts or case studies to show how ICTs are being used for improvements in service delivery. Relhan et al. (2011) presented a breakdown of the potential for ICTs in various sectors (with a focus on service delivery), including economic development, intergovernmental fiscal relations, urban poverty, urban planning, climate change, and water and sanitation. Yonazi et al. (2012) described specific case studies of ICT projects in various sectors (agriculture, climate change, education, financial services, health). Finally, Hare (2007) covered the example of WoredaNet in Ethiopia, which uses cable and satellite connections to connect Ethiopia's

local councils to 11 regional capitals through internet telephone and videoconferencing, and also provides connectivity to other Ethiopian ICT initiatives.

Several other articles also stressed governments' efforts to improve services through ICTs (Belachew 2010; Gagliardone 2009; Hare 2007; Msimang 2011; Ndavula and Mderia 2012; Ochara 2012). Belachew (2010), for instance, used the examples of Schoolnet, Woredanet, and the Ethiopian Education and Research Network (EthERNET) to discuss how ICT programs implemented by the government are enhancing both governance and service delivery in Ethiopia. Gagliardone (2009) analyzed the same projects in Ethiopia through the lens of 'technopolitics' – 'the strategic practice of designing or using technology to constitute, embody, or enact political goals' (2009: 10) – to argue that Woredanet and Schoolnet were developed not just as tools to improve efficiency, but rather to support the state and nationbuilding project pursued by the Ethiopian government.

Only a few articles addressed the role of the private sector in improving service delivery. Amongst the three focus countries, Kenya appeared to be leading in implementing private sector e-services delivery. In the water sector, Moraa et al. (2012) found up to 10 mobile-based water-related applications in use in Kenya, ranging from applications facilitating communication between citizens and water providers to mapping wells in drought-prone regions. Like much of the other literature reviewed, however, Moraa and her colleagues did not provide evidence that these technologies were having an impact on service delivery.

E-governance (using ICTs to improve governance outcomes), e-government (increasing efficiency of government services through creation of publicly accessible online platforms), and mobile governance (m-governance) were also major themes in the literature (Atnafu et al. 2011; Crandall and Mutuku 2011; Minishi-Majanja and Ondari-Okemwa 2009; Mitullah and Waema 2011; Mutula 2008; Pathak et al. 2007; Pathak et al. 2012; Rorissa

and Demissie 2010; Singh et al. 2010; Thomas et al. 2010; Waema 2011; Yonazi et al. 2012). Many of the pieces in this category, however, focused on measuring the e-readiness of towns and/or countries rather than evaluating the results of e-governance initiatives.

A handful of the e-governance studies (Atnafu et al., 2011; Crandall and Mutuku 2011; Mitulla and Waema 2011; Ochara 2012; Pathak et al. 2007, 2012; Singh et al. 2010; Thomas et al. 2010; Waema 2011; Yonazi et al. 2012) attempted to assess the impact of e-government projects through interviews with citizens about how they themselves assess these initiatives. Crandall and Mutuku (2011) noted that health, education, and immigration services are among the top sectors employing e-services in Kenya, but found that most of the individuals surveyed believed face-to-face interaction with government is most effective. Pathak et al. (2007, 2012) and Singh et al. (2010) conducted surveys that found that citizens believed e-government *could* reduce corruption and improve the relationship between citizens and the state.

Thomas et al. (2010) looked at four countries – Kenya, Tanzania, South Africa, and Ghana – and four attempts to improve e-government technologies. The authors made the argument that e-government improves the relationship between the public and the state. Although they concluded that these projects are all at least somewhat successful, and ‘have had an immediate business impact, provided cost-efficiencies, reduced waste, and improved overall efficiency,’ they provided no evidence for these claims (2010: 80). Waema (2011) concluded that local e-governance initiatives generally do improve efficiency but *not* communication with citizens. He also found that most governments in Africa recognize the importance of ICTs and are eager to promote them but face multiple barriers.

These articles for the most part acknowledge that ICTs are not a silver bullet, and that many current e-governance initiatives

are weak and lack evidence of impact. Yonazi et al. (2012) argued specifically that the 2000s were about increasing penetration and connectivity, bringing more African citizens into the information society, but that the present decade must focus on demonstrating impact on sector development.

Authors discussing government-initiated ICT interventions consistently presented two challenges to using ICTs for statebuilding projects: lack of adequate infrastructure to sustain significant ICT programs and continued reliance on traditional media for many activities related to these areas (Atnafu et al. 2011; Brännström 2012; Hare 2007; Hellstrom and Karefelt 2011; Mbarika and Byrd 2009; Moraa et al. 2012; Msimang 2011; Waema 2011). A lack of adequate infrastructure contributes to the fact that a large proportion of citizens are not yet using these ICTs. In Kenya, for instance, political debate on Twitter became heated in the lead-up to the 2013 presidential elections, but less than 5 per cent of Kenyans used Twitter (Kretchun 2013). Brännström’s (2012) investigation of gender and other social discrepancies in accessing and using some ICTs in Kenya and Somalia found that existing official statistics did not fully capture use of the new telecommunication systems by different social groups.

A smaller set of scholarship on government-led ICT efforts took a more skeptical view, questioning whether advances in ICT as envisioned by the Global North can have the hoped for outcomes (Association for Progressive Communication 2009; Crandall and Mutuku 2011; Gagliardone 2009; Goldstein and Rotich 2008; International Records Management Trust 2011; Moraa et al. 2012; Ochara 2012). Ochara (2012) argued not only that e-government faces practical hurdles, but that it can actually have negative consequences, stressing that Kenyan authorities were compelled to adopt service delivery standards by global actors with more ‘power’ (2012: 96).

The corpus of research focusing on top-down approaches was complemented by

a smaller group that examined *bottom-up* approaches to e-governance or provided criticism and caution against top-down approaches (Amoretti 2007; Asiedu 2012; Berger 2012; Mudhai 2011; Padania and Silvani 2009; Servaes 2009). As Asiedu (2012) argued, simple 'access' to technologies is insufficient (2012: 244). Some of this work considers how new media interacts with old media, referred to as 'technology blending'; (Asiedu 2012) and 'networked journalism' (Mudhai 2011). Berger (2012) also highlighted the need to pay attention to the intersection of new and old media such as SMS and radio.

A small subset of articles offered empirical analysis of the potential for social media to transform the relationship between state and society in contemporary Africa (e.g., Ethio-Zagol 2007; Mbarika et al. 2007; Mudhai 2004; Ndavula and Mderia 2012; Nyabuga 2008; Mäkinen and Kuira 2008; Sarrazin 2011). Some authors, however (Ndavula and Mdeira 2012; Nyabuga 2008), noted that only a small segment of Africans are currently able to access these online social networking sites. Due to the limited reach of social media, Ndavula and Mdeira (2012) argued that social media create diffused discussion among citizens rather than direct and meaningful dialogue with the state. Similarly, Mudhai (2004) posits that online social media sites are not replacing earlier sociopolitical networks but rather enabling 'a multiplicity of actors' to engage in public sphere discussion (2004: 328). Taking the argument one step further, Nyabuga (2008) argues that because internet use is still dominated by the urban and upper economic classes, the net gains accrued from internet use favor those already in power and reinforce the status quo. These arguments repeat the call of some of the authors listed above (Asiedu 2012; Berger 2012; Mudhai 2011) to avoid assuming that new technologies present a qualitatively *different* form of communication opportunity, or a new model for political participation.

One way social networking sites do seem to be strengthening participation, however, is through the diaspora (Issa-Salwe 2006; Skjerdal 2011). In Somalia, for example, Issa-Salwe (2006) noted that as the country recovered from civil war, the internet became a means of promoting 'group political identity' within the Somali diaspora, although it also served to amplify political and social divisions. Skjerdal (2011) found that although editors believe journalism should be impartial, independent, and ethical, online diaspora news media were characterized by activism and favoritism, even though they were aware of accepted professional norms.

Some of the literature also examined the failure of technology to deliver anticipated results, especially during elections. The Huduma initiative, for example, was established to enable Kenyan citizens to voice difficulties encountered with using public services, particularly in the education, health, governance, infrastructure, water, and justice sectors, was one project that did not meet its expected potential (Bott and Young 2012). In the first six months of its launch in early 2011, it was reported that stakeholder buy-in was low even though contributions could be submitted anonymously and only the sender's location would display on the portal. Out of more than 3,000 reports submitted by citizens, only 12 were processed and none had been resolved (Bott and Young 2012). Lewoyehu (2011) studied perceptions of the governing and opposition political parties in Ethiopia of the prospect of implementing an e-voting scheme in Ethiopia and concluded that shortage of technological infrastructure, low literacy rates, and low awareness levels among citizens would be hindrances. A report by ICT4Peace (2009) identified similar challenges, noting that ICTs in the field did not work as expected due to technical problems and the reluctance of individuals to share information. In Kenya, there are still many hurdles with regard to the use of ICTs to improve elections, indicated by issues like loss of electricity, software crashes,

overloaded SMS networks for reporting election results, and a glitch that may have disqualified more than a quarter of a million voters using the new Biometric Voter registration system (Bowman and Longwe 2013; Warner 2013).

ICTs and peacebuilding

The evidence on the role of ICTs in peacebuilding efforts was sparse, although the results of the statebuilding and peacebuilding searches had significant parallels and overlaps. The majority of documents surveyed espoused the potential of ICTs to promote peace, but tended to primarily provide descriptions of how the technologies were or might be utilized, with little evidence of actual impact. This contrasts with literature on older technologies (such as radio and television) promoting peacebuilding, which has been comparatively more abundant (e.g., Abdalla and Arafa 2011; Frank et al. 2011; Heather et al. 2008; Limagur 2011; Management Systems International 2001; Paluck 2009).

Similar to the case of statebuilding, we were particularly interested in work analyzing the role of actors other than the state, including the media and civil society organizations. The following two sections divide the findings according to the two main typologies of tools employed in peacebuilding efforts considered in the literature – crowdsourcing platforms and SMS – and explore the evidence around these areas.

Omenya and Crandall (2013) and the Harvard Humanitarian Initiative (HHI) (2011) looked specifically at Uchaguzi, a system put in place just before the 2010 referendum in Kenya, designed to be a kind of ‘Ushahidi 2.0,’ developed to avert a potential crisis. As with Ushahidi, it was designed to collect reports of violence around Kenya and map them online. HHI’s evaluation found that many members of the public confused SMS shortcodes, and that some members of the public could not properly use the map on the Uchaguzi website. Sambuli et al.

(2013) compared Twitter and Uchaguzi in terms of the ability to track events during the 2013 general elections in Kenya as well, concluding that Uchaguzi had some advantages over Twitter, as the latter was seen as a more important source for highlighting and reporting the most significant incidents.⁴

A second evaluation by HHI (2012) focused on the ‘Unsung Heroes Peace Project’ in Kenya, which aimed to ‘motivate and symbolize goodwill amongst (young) Kenyans towards each other in the aftermath of the violence and conflict which started in December 2007’ (2012: 1). This project was used to promote peace rather than deter violence and project staff stated that it ‘sparked more positive action from the winners, which in turn led to more positive events’ (2012: 3). The report stated that a national survey was conducted to understand the impact of the project, but no details of the survey were given, except to say that ‘95 per cent of people surveyed thought the campaign was associated with changes in their community’ (2012: 11).⁵

Hellstrom and Karefelt (2011) analyzed ‘UgandaWatch,’ which used the Ushahidi platform to monitor the 2011 Ugandan elections using an SMS survey. In terms of democratic participation, they found that a significant portion of those who used the service did not take part in other political activities, and it therefore provided a platform for those who did not have other means to participate in the political arena. Belinsky (2010) similarly looked at the use of crowdsourcing for election monitoring in Ethiopia through the ‘Ethiopia Vote Monitor’ project, which also used the Ushahidi platform. The platform was briefly described in a blog post on the Ushahidi website, and received just 15 reports. The author stated that he is ‘confident that number is part of an exponential rise in the number of people who actually heard the message contained within those reports’ (para. 4).

Windt and Humphreys (2012) highlighted how these platforms often fail to mobilize

citizens directly, relying instead on volunteers or trained reporters in order to properly function. They examined the case of Voix des Kivus, a pilot project designed to determine the utility of gathering data on incidents of violence via SMS using FrontlineSMS. The authors addressed the challenges of mobilizing the population to report on incidents of violence accurately, suggesting that crowd-seeding, which relies on gathering information flows from preselected reporters, rather than crowdsourcing, is a better strategy to gather accurate information on incidents of violence. Rosenberg (2012) also questioned whether there are alternatives to crowdsourcing to assess and respond to crises.

A second set of articles addressed the role of SMS both in promoting peacebuilding as well as encouraging violence. Abdi and Deane (2008) looked at the use of media following the 2007 elections in Kenya and argued that SMS messages carried many of the hate messages that were circulated. The report specifically took to task the notion presented by some (e.g., Putzel and van der Zwan 2006; Allen and Stremlau 2005) that in fragile states, the creation of a stable and functioning government may sometimes be more urgent than a free and open media sector. The authors acknowledged that free media allowed for hateful SMS messaging, however they also noted that an authoritarian media system would produce a similar result.

Government efforts to prevent the spread of hate speech or incitement to violence were also documented in the literature, although with little analysis of effectiveness. In September 2012, to guard against inflammatory speech, the Communications Commission of Kenya issued guidelines for bulk transmission of SMS messages on political issues, requiring service providers to vet content before either sending or rejecting it. In March 2013, as the election approached, Kenya's communications and information ministry reportedly warned internet service providers not to allow IP addresses to be used to spread inflammatory messages, and

warned that provider firms would be held accountable for any such messages communicated via their articulating. Ahead of the elections, the Communications Commission reportedly blocked access to the web portal Mashada, accusing it of failing to moderate hate speech (Jamani 2013). More drastic measures were taken by governments concerned that they would be unable to control the mobilization organized through new technologies, as occurred during Ethiopia's 2005 post-election violence when the government interrupted SMS services for more than a year in reaction to protests (Malone 2010).

SMS messages were seen as significant not only for their role in encouraging or mapping violence, but also as vehicles to disseminate messages of peace and reconciliation. Goldstein and Rotich (2008), for example, explained how Safaricom, Kenya's leading telecommunications service provider, reportedly sent out 'messages of peace' to its nine million subscribers during the post-election violence that erupted in 2007 and 2008 and pointed out that online bulletin boards could fulfill a similar function. They mentioned the case of the site 'I Have No Tribe,' which explicitly centered on constructive dialogue among Kenyans. Sisi ni Amani, a Kenyan NGO, also sends out SMS messages of peace (UN OCHA 2013).

Finally, the Umati project, by iHub (the same group that created Ushahidi), was also highlighted in the literature. This project monitored messaging on social media in Kenya from September 2012 until the elections in March 2013, and recorded incidents of hateful and dangerous speech. The reports published as part of this effort observed that while the 2013 elections were largely peaceful, much of the 'violence' shifted to the online space, particularly Facebook and Twitter (iHub Research 2013).

Discussion

The literature review led to four primary conclusions, outlined below.

1. Limited evidence on actual impact of ICTs. Despite much excitement and optimism about the role of ICTs in peacebuilding and statebuilding, the evidence of actual impact is thin. The literature is dominated by advocates and organizations that suggest uses of ICTs rather than identify how ICTs have worked or failed to work. Much of the research has been commissioned by those involved in the interventions. Many articles found in the review featured summaries or descriptive reports of projects that had taken place, without in-depth analysis of the project's impact or its use by citizens. This finding should not be surprising for those engaged in the field; the African Research Institute (2011) lamented that evidence of the 'grand' claims of positive lasting impacts of technology in Africa were 'thin on the ground'; Gillwald (2010) called for more empirical research and less normative assumptions; and Shoemaker and Stremlau (2014) reached a similar conclusion in their broader systematic literature review focusing on evidence of media in conflict.

2. Techno-determinist assumptions within literature on statebuilding. In the specific case of literature on statebuilding, most of the literature adopted as its implicit reference a Weberian model of the state in which ICTs are framed either as tools that can reinforce the capacity of the government to function or that can increase the ability of citizens to hold state actors accountable. Many of the studies take for granted the idea that access to ICTs alone will improve the government-citizen relationship by improving communication and limiting inefficiencies and corruption, and therefore that lack of access and infrastructure act as bottlenecks for improved governance. The World Bank's 'Broadband in Kenya: Build it and they will come' report (Msimang 2011) typifies this viewpoint, but this approach has been shared by many other publications over the years (See for example Thomas et al. 2010; Pathak et al. 2007; Rorissa and Demissie 2010; Minishi-Majanja and Ondari-Okemwa 2009).

The common assumption that access to ICTs will spur democratic behaviors and political and democratic outcomes eschews evaluation of how particular cultural and sociological contexts drive ICT use in unique or unexpected ways. ICTs were generally framed as existing on their own plane – creating a new layer of opportunities to affect the functioning of the state or peace efforts – rather than as a new variable that sits within existing power structures and pre-existing networks. This is illustrated by the lack of scholarship that looked at *how users actually engage* with ICTs, at the possibilities for integration and hybridization between new and old technologies, or at the repercussions of innovative ICT use on statebuilding. Although our review emphasized contemporary scholarship, it should be pointed out that this literature, with its rankings of e-readiness, analyses of e-governance projects, and descriptions of the use of ICTs for crisis response, engages little with scholarship on the history of technological innovation or historical relationships between technology, citizens, and the state.

There were some exceptions, with several studies discussing the blending of old and new media, and instances when ICT promises have fallen flat or even had negative repercussions. Given previous research that has pointed to an overwhelming rate of failure for e-governance projects (e.g., Heeks 2002), the expected reports of failures in an African context and in the three focus countries were largely absent. Additionally, even those studies offering alternative viewpoints still typically lacked the perspectives of those who actually use ICTs.

3. ICT and peacebuilding literature still in its infancy. This review found few articles on the role of ICTs in peacebuilding. The articles mostly focused on crowd-sourcing platforms, such as Ushahidi, and on SMS. Because these platforms are relatively new, there are few critical analyses of their uses or impacts. Only a small subset of articles questioned the utility of crowdsourcing platforms.

Much emphasis was placed on ICTs as agents that could prevent the occurrence of violence, but less attention was given to how traditional forms of reconciliation, including transitional justice measures, could be enhanced by the use of new technologies. While factors characteristic of a specific locality were cited as hampering peace efforts, there was little mention of how they could actually support such efforts. This absence of reference to local knowledge and traditions is more striking than in the case of the literature on statebuilding, given the long-standing tradition of looking at how locally rooted resolution and reconciliation mechanisms have been used in conflict and post-conflict situations. Future work in this area would therefore benefit from attention to how ICT users are taking advantage of ICTs to facilitate post-conflict peacebuilding, healing, and justice.

4. Lack of reference to 'local knowledge.' Ultimately, our analysis found little difference between literature emanating from Africa and from the rest of the world. Literature from both locales is normative and generalized, touting the assumed inevitable progression from greater ICT access to greater democracy and citizen voice.

There is indeed 'local knowledge' that can inform uses of ICTs for statebuilding and peacebuilding, but there have been few attempts to reflect on how it is, or can be, applied (Stremlau 2012). There is certainly an understanding in Africa of the complexities of implementing ICT projects in conflict and post-conflict scenarios but opportunities for donor funding and capital investment may incentivize an emphasis on more optimistic and simplistic trajectories.

This emphasis is also a direct corollary of the fact that much of the work on ICTs in Africa was found in the gray literature – in the form of reports from NGOs and civil society organization that are reporting on their own projects and may be reluctant to report on the failures or limitations of ICTs if they rely on donor funding. ICTs are creating

new spaces of experimentation where local knowledge could be used to inform new applications.

The way forward

Our findings suggest that a narrative has developed about the transformative potential of ICTs – one that emphasizes particular uses and strategic benefits of ICTs and de-emphasizes others. ICTs have tended to be used in building new images of the nation – encompassing all citizens, promoting fairness, and offering a future of security, economic prosperity, and everyday well-being. To date, most analyses have focused on this plane, viewing ICTs as a new reality that is being built on top of pre-existing ones, rather than exploring the ways in which new and old practices and technologies coexist and integrate.

Insufficient research and critical discourse exist around how ICTs are actually being used by citizens for security, service delivery, and political ends, or on alternative uses of ICTs. While there is a common refrain in much of the literature that more evidence of the impacts of ICTs is needed, we heed researchers and practitioners to take this call one step further, and look more closely not only at the impacts of projects designed to promote a particular idealized notion of the function of ICTs, but also at the 'projects' which are occurring through local citizens and local communities, and which may not be those receiving heavy funding or media attention. These local, organic uses of ICTs, based on the immediate needs of communities rather than the funding requirements of donors, are more likely to provide insight on how ICTs are influencing statebuilding and peacebuilding, and what potential they have at a regional or national level.

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Notes

- ¹ We use the term Global North to refer to richer countries, largely those above the World GDP per capita (at Purchasing Power Parity). As the Carnegie Council for Ethics in International Affairs recently argued, authors from these countries dominate intellectual scholarship, including scholarship focusing on less economically developed regions. See http://www.carnegiecouncil.org/publications/ethics_online/0091
- ² CIPESA was founded by Bridges.org (South Africa) in partnership with Makerere University (Uganda) and the Berkman Center for Internet & Society (Harvard University, U.S.).
- ³ For detailed information about the initiative, see <http://carnegie.org/news/press-releases/story/news-action/single/view/eliciting-and-applying-local-research-knowledge-for-peacebuilding-and-statebuilding-africa/>
- ⁴ It is notable that Patrick Meier, who was Director of crisis mapping at Ushahidi, is also a Research Fellow at HHI, which conducted the evaluation of the project.
- ⁵ The report stated that more information about the survey was included in Appendix 3, but we found no Appendix 3 in the report.

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