WHITE PAPER

Current Challenges: Information Communication Technologies for Human Rights Documentation

Nathaniel Raymond, Director, Signal Program on Human Security and Technology, Harvard Humanitarian Initiative

Brittany Card, Data Analysis Manager, Signal Program on Human Security and Technology, Harvard Humanitarian Initiative

Issac Baker, Imagery Analysis Manager, Signal Program on Human Security and Technology, Harvard Humanitarian Initiative

Colette Mazzucelli, Associate Professor (Adjunct), Center for Global Affairs, New York University SCPS

Marie-Helen Maras, Associate Professor, John Jay College of Criminal Justice

Michelle D. Miranda, Assistant Professor, Department of Security Systems and Law Enforcement Technology, Farmingdale State College-SUNY

March 2014

This is a paper for the Working Session on ‘Current Challenges: Information Communication Technologies for Human Rights Documentation’ at the Build Peace 2014 Conference.

Build Peace has been made possible thanks to the generous support of our sponsors.
Introduction

This working session will focus on uses of information communication technologies (ICT) by civil society to document human rights abuses and collect evidence relating to mass atrocities, including sexual violence, and other conflict-related phenomena. These technologies represent ways in which civil society is collecting both macro and micro level data relating to abuses and the experiences of vulnerable populations.

The working session will specifically examine remote sensing analyses of armed conflicts and digital evidence collection related to sexual violence. As civil society continues to gain increasing access to these technologies and experience in their use, discourse about applying forensic standards for the gathering of potential evidence and the ethical challenges surrounding the creation and deployment of these technologies are critical.

Remote Sensing

Remote sensing techniques, particularly the analysis of high resolution satellite imagery, are increasingly being employed by non-governmental organizations (NGOs), academic institutions, and international agencies to document alleged evidence of gross human rights abuses.¹ These tools are applied for a wide range of purposes, including advocacy, research, early warning, and judicial accountability. Types of documented phenomena include the intentional destruction of civilian dwellings, attacks on humanitarian infrastructure, and the location of displaced persons camps.

Increasing access to technology has led to the development of this sub-sector of human rights and humanitarian practice within the past decade or so. Despite the proliferation of this application, there are critical absences of agreed evidentiary standards, best practices, and professional ethics for the use of remote sensing and related technologies in this unique context exist.² Unlike international forensic investigations for human rights,³ there is no pedagogy and cross-organization professional dialogue.

The absence of a uniform pedagogy and standards of professional practice for the collection of remote sensing data relating to abuses and mass atrocities, as well as the employment of other ICT, have multiple, potentially negative implications for the field. These implications may include: Challenges to the admissibility and credibility of remote sensing and ICT-derived analysis in international tribunals and domestic judicial settings; inconsistent methodologies and evidentiary standards for the collection, analysis, and presentation of findings may undermine the widespread adoption of these tools; and An absence of procedures and ethics for the protection of the vulnerable populations could further endanger already at-risk communities in conflict zones.

Digital Evidence Collection Relevant to Sexual Violence

Victims of sexual violence turn to the criminal justice system to prevent suspects from receiving impunity for their crimes. To pursue a case against a perpetrator, evidence of the crime must be collected. Computers and mobile technologies can serve as potential tools for gathering information in threatened communities. The key to determining the extent to which these technologies aid in the collection of data is identifying the type of technologies in use in the region and what type of evidence can be gleaned from them. The information gathering approach taken for evidence preservation and protection must respect the rule of law and human rights.

---

A unilateral approach to conducting investigations that involve computers and mobile technologies (hereafter, collectively known as digital devices) does not exist. Some barriers to the domestic and international collection of evidence on digital devices and the effective investigation of digital devices include:

- **Varying rules of evidence collection.** Domestic rules of evidence vary between nations. These rules dictate the type of information that can be collected from computers and mobile technologies and the ways it should be collected to ensure its admissibility in court. To ensure the admissibility of evidence, the chain of custody, which includes information about who collected the evidence, where and how the evidence was collected, which individuals took possession of the evidence, and when they took possession of it, must be maintained.⁴

- **Lack of capacity.** Some countries vary in terms of their capability to conduct investigations that involve digital devices.⁵ In fact, to date, certain countries still lack the capacity to effectively retrieve evidence from these devices. Here, capacity is determined by the number of professionals that can conduct investigations. Specifically, certain countries do not have the necessary digital forensics professionals or at the very least they do not have enough digital forensics professionals to analyze overwhelming quantities of electronic data. A 2013 United Nations Office on Drugs and Crime (UNDOC) report highlighted that this lack of capacity is the direct result of the challenges that many countries face in recruiting personnel with the sufficient digital forensics skills.⁶ In fact, in many developing countries, law enforcement often lack the requisite knowledge and skills to collect information from digital devices.⁷ The UNDOC report also indicated that several countries lacked the necessary resources (e.g., computer forensics tools and equipment) to conduct investigations involving digital devices.⁸ This prevents law enforcement from being able to effectively collect and analyze electronic evidence during an investigation.

- **Lack of effective enforcement mechanisms.** Enforcement occurs when a country compels compliance or punishes noncompliance with its laws. Compliance can be achieved by strengthening the monitoring and enforcement of standards. Developing countries often lack strong enforcement mechanisms to successfully pursue criminals.⁹ In these countries, criminals are confident that they will (most likely) not be prosecuted for committing crimes; to such an extent that they commonly do not take precautionary measures to hide their illicit activities, especially on digital devices. It is important to note that even if perpetrators delete incriminating data from digital devices, it can be retrieved by investigators. Digital forensics tools can be used to retrieve evidence in such situations.

---

⁴ The chain of custody refers to the process by which investigators preserve evidence throughout the life cycle of a case. The chain of custody log is normally kept to show that the evidence has been properly handled and that it was not at a risk of being compromised. Marie-Helen Maras, *Computer Forensics: Cybercriminals, Laws, and Evidence* (2nd edition) (Massachusetts: Jones and Bartlett, 2014).


Sexual violence in conflict is a crime against humanity that accentuates the engagement of an emerging global civil society defined by Castells in terms of trends in local community engagement, the evolution of non-governmental organizations, the development of social movements, and public opinion mobilization on a global scale. These are the key civil society actors for whom pedagogy is crucial in their engagement to end sexual violence in conflict. The "glocal" process, which uploads experiences at the grassroots to inform a global conversation thereby connecting local survivors to global activists, aims to exert pressure on states complicit in mass atrocities. The engagement of transnational advocacy networks, known as TANs, is vital in this context. Armed with the pedagogical tools analyzed in this presentation, TANs have the potential to effect transformative change within complicit states by empowering those in local areas who are denied the voice to which they are entitled by the Universal Declaration of Human Rights.

Key issues

Civil society plays an essential role in documenting mass atrocities and their impact on victims. There is a need to 1) establish procedures, 2) identify best practices, and 3) uphold professional ethics are each critical to develop pedagogy in the following ways. Some of the specific areas that need to be urgently and formally addressed by practitioners using these tools to collect evidence of abuses include the development of pedagogy for the following areas:

- **Guidelines for the preservation of chain-of-custody:** Although evidence collected by ICT has been submitted as part of international law cases, an agreed set of best practices for how to collect, release, annotate, layout, and report findings of alleged abuses does not yet exist. Standards and protocols are critical for these analyses to be accurate, credible and of use in courts and public discourse. The potential factors that can compromise remotely collected evidence of alleged abuses are different than physical evidence and are neither codified nor fully understood. These factors can include:
  - Recording manipulations and computer-assisted adjustments made to satellite images original images, such as the use of multispectral bands for analysis, orthorectification, and changes to the image’s original size and resolution
  - Standard protocol for the preservation of primary source digital and non-digital data used to assist in imagery analysis, such as eyewitness testimony, media reports, and NGO press releases
  - Common computer security standards for ensuring control of evidence, protection from hacking, and mitigation of other related threats to digital data

- **Comprehensive code of professional ethics:** Currently, there is no comprehensive code of ethics for the collection evidence of abuses using ICT. In contrast to other professions, human rights analysts using these tools do not have an equivalent to either the physician’s Hippocratic Oath or the social scientist’s institutional review board to address the unique issues of potential harm, beneficence and malfeasance, consent, and disclosure of identifiable information they face.

---

● **Establish procedures to protect the vulnerable:** The release of ICT data, like satellite imagery analysis, can create new threats to the safety of vulnerable populations and heighten pre-existing ones. Of particular importance in the engagement of civil society actors is the willingness of local community members in specific contexts to provide testimonies, like as part of interviews to document sexual violence in conflict. Potential interviewers must be specifically trained to document evidence, which may be used to prosecute the perpetrators. Interviewers have the responsibility to evaluate safety and security risks to the interviewees, to learn how to craft ethical and open-ended questions, and to focus on obtaining informed consent from the interviewees.¹⁴

These sector-specific risks include public identification of the coordinates of displaced populations being targeted by alleged perpetrators, the public release of the locations and dispositions of mass graves, and potentially causing alleged perpetrators to change their behavior in often unpredictable ways to avoid monitoring. Currently there are no accepted procedures for identifying, assessing, mitigating, and responding to the unique threats that analysts face and can cause.

● **Identify best practices for the presentation of evidence:** Civil society is responsible to break the conspiracy of silence¹⁵ and to map local, communal, regional, national, and global actors responsible for abuses in conflict, like sexual violence. Best practices must be identified to allow civil society actors to share testimonies of survivors widely using social media and mobile technology without endangering victims and vulnerable populations. Other best mapping practices must be identified to provide a graphic overview of the tensions in civil society, including local communities in conflict, without exposing those on the ground to physical danger.

● **Uphold professional ethics.** Those in civil society whose vocation is to conduct remote and field research to collect evidence of abuses in conflict using ICTs have a responsibility to communicate with Institutional Review Boards for Protection of Human Subjects at universities to uphold professional ethics involving potential harm, consent, and disclosure of information acquired. This is particularly significant in thinking about how to upload local narratives¹⁶ to address a global policy concern by disclosing testimonies of sexual violence in conflict.

---