Digital Developments
Harbingers of Humanitarian Change?

Carleen Maitland

Centre for International
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About the Author

Carleen Maitland is an associate professor and a co-director of the Institute for Information Policy in Pennsylvania State University's College of Information Sciences and Technology. She is an internationally recognized expert in humanitarian informatics, examining the socio-technical systems shaping flows of information in international aid. By investigating both organizational and technical systems, she generates insights for understanding potential uses and impacts of technology as well as for informing policy and strategy. Her work is conducted in a variety of marginalized community contexts, including communities in the Middle East and East Africa, together with UN agencies and non-governmental organizations. Findings of these studies are reported in more than 100 published articles, as well as in her edited volume *Digital Lifeline? ICTs for Refugees and Displaced Persons* (MIT Press, 2018). Carleen also serves on advisory boards for several organizations, including the United Nations University Institute on Computing and Society.

Acronyms and Abbreviations

BIMS	biometric identity management system
CTEN	Community Technology Empowerment Network
GBVIMS	Gender-Based Violence Information Management System
ICTs	information and communication technologies
INGOs	international NGOs
IT	information technology
NGOs	non-governmental organizations
RSD	refugee status determination
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNGA	UN General Assembly
UNHCR	UN High Commissioner for Refugees/UN Refugee Agency
VTC	volunteer technical community
WFP	World Food Programme

Executive Summary

Information and communication technologies (ICTs) are changing the nature of humanitarian response to forcible displacement of people. These changes are underpinned by broader technical and societal trends. Together, they are interrelated and co-evolving. In turn, they generate positive and negative effects for refugees, for organizations and for the humanitarian community as a whole.

This analysis highlights and explains three specific developments across these multiple levels. The first, the "digital refugee," is the digital form of a bona fide refugee, being constructed not only by humanitarian organizations but also by refugees themselves. In the second development, "digital humanitarian brokerage," traditional humanitarian organizations use digital platforms for brokering, enabling others to offer goods and services such as food and housing. Finally, the third development, "digital self-sufficiency," melds refugees' growing use of digital technologies with calls for enhancing refugee self-sufficiency, such as those articulated in the 2018 Global Compact on Refugees from the UN High Commissioner for Refugees (UNHCR). Digital self-sufficiency includes economic dimensions, such as remote digital work, but also considers the role of refugee community data in supporting community problem solving.

In light of these developments, this paper offers cross-cutting recommendations for academics, advocacy organizations, humanitarian organizations and refugees alike. First, increasing digitalization requires comprehensive digital protection policies safeguarding *all* refugee data and devices, including the data they generate themselves. Also, the efficiency and transparency advantages of digital tools in humanitarian programs hinder attention to their disadvantages and even harms. Accordingly, independent analyses are needed. Finally, as refugees take on greater responsibilities in digital humanitarian brokerage and digital self-sufficiency, they should serve as partners in policy making.

Introduction

Refugee crises, with millions of people seeking safety by fleeing across national borders, are unfolding amid increasingly intensive use of ICTs. Mobile phones, having evolved from mere communication devices, are an indispensable digital companion to many. This trend is evidenced by the lengths to which many refugees will go to keep their mobile devices charged. Even further, some refugees sell their food rations to maintain "available minutes" for making calls and finding information (UNHCR 2016).

At the same time, humanitarian organizations use a wide range of ICTs — biometrics, database systems, mobile payment systems and artificial intelligence — with the aim of improving their programs. Goals include streamlining services, enhancing efficiency and accountability, and reducing costs.

These technologies have arguably improved refugees' lives. Mobile phones enable displaced people to communicate during harrowing journeys, and store and share photos of happier times. Critically, they also enable people to capture evidence of the atrocities from which they fled, increasing the chance that perpetrators will be held accountable for mass atrocities and violations of international law.

By some measures, ICT use has improved assistance (UNHCR and World Food Programme [WFP] 2015). Aid can be delivered more conveniently using mobile phones. For example, instead of waiting hours to receive a food ration, refugees can directly receive funds via "mobile money" — an electronic wallet service that allows users to receive, store and spend money with authorized vendors using their mobile phones. Refugees are able to use mobile money to select and purchase food and other necessities. For families, meals are more satisfying, and the process of shopping with this technology provides a greater semblance of "normal" life.

Yet, mobile phones and other ICTs can also generate harms. While they are fleeing, information stored on phones can make refugees targets for interrogation and torture. Easy access to *dis*information can increase refugees' vulnerability to fraud, as evidenced by those swindled by middlemen on journeys to seek freedom (Borkert, Fisher and Yafi 2018). Moreover, the phones

themselves can become infected with viruses and spyware, compromising sensitive information and potentially impinging upon privacy (Maitland and Bharania 2017). To add to this, humanitarian agencies' use of complex information systems can also create vulnerabilities, further infringing refugees' privacy and hindering their ability to exercise control over their personal information.

Understanding these trends is critical for humanitarian leaders, public policy makers and academics to successfully inform and manage the shared responsibility of the protection of refugees and internally displaced people. These trends have the potential to create profound changes, possibly even to change the boundaries of what constitutes "protection," a notion upon which the humanitarian system is based. While broader challenges of data protections, digital identity and digital privacy may expand the concept of protection, social media and mobile money platforms may provide new means of provisioning protection services. However, the influence of technological change is not determinative; rather, it exerts its influence through social and sectoral trends and innovations.

To account for simultaneity of these phenomena, this analysis applies a social informatics lens,[1] combining both social and technical components, to identify key developments. In particular, three interrelated developments are highlighted:

→ the emergence of the digital refugee;

→ a reconfiguration of aid toward digital humanitarian brokerage; and

→ the further growth of digitally enabled self-sufficiency.

With these examples, this paper highlights implications of technological change at several levels, including individual refugees; organizations providing programs and services; and the sector as a whole. The totality of the effects of these changes are uncertain, yet each requires a strategic and policy response to help amplify benefits and minimize harms.

To understand the basis of these developments and their potential impacts, the discussion below begins with some background, highlighting key

elements of social informatics, summarizing the range of technologies considered here and overviewing humanitarian trends relevant to the changes proposed. Separate sections further fleshing out the concepts of the digital refugee, digital humanitarian brokerage and digitally enabled self-sufficiency follow. Finally, the recommendations and conclusion identify a range of research questions that, if pursued, can help inform policy making to amplify the benefits and mitigate the negative effects of these trends.

Social Informatics Perspective

Ensuring a balanced and forward-looking assessment of technology's effects on humanitarian action requires an explicit framework to guard against techno-utopian tendencies. Indeed, Kentaro Toyama (2015) dedicated an entire book to the topic. Here, a framework derived from social informatics scholarship not only provides balance in assessments of impacts, but also highlights the mechanisms through which ICT innovation unfolds and interacts with social systems.

Social informatics embraces the duality of social and technical systems, viewing them as separate yet mutually dependent (Kling 2000; Sawyer and Rosenbaum 2000). As the systems co-evolve, precise technological effects on society, organizations and individuals are difficult to foresee. They may be positive or negative or both. These include different effects across varying levels of individuals, groups, organizations and society, as well as across the ICT architecture.

These different effects are more visible when technologies are recognized as "configurable," being composed of multiple distinct components with varying properties (Sawyer and Rosenbaum 2000). Attention to configurability helps avoid not only overly simplistic views of technology but also the pitfall of "black-boxing" technology so that its specific characteristics, determined through choices made by human designers, are glossed over completely (Orlikowski and Iacono 2001). For example, an analysis of mobile phone use by refugees would account for the multitude

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1 Social informatics is "the interdisciplinary study of the design, uses and consequences of information technologies that takes into account their interaction with institutional and cultural contexts" (Kling 2007).

of configurations, including various applications, that each individual phone represents.

Given the nature of innovation in ICTs, the phenomenon of emergence is of central concern for social informatics theory (Markus and Robey 1988). Emergence implies the formation of the whole through interactions between subsystems, yet the result is more than merely the sum of the parts (Axelrod and Cohen 1999). Emergence is particularly visible within organizations, where development of information technology (IT) architectures and the functions and structures of organizations are inextricably intertwined (Markus and Robey 1988; Orlikowski and Robey 1991; Orlikowski 1993). Within this state of mutual emergence, organizations, and entire industries, are influenced by external and often unpredictable forces.

Together, these tenets of social informatics provide a framework for simultaneously analyzing technical and social trends for refugees and displaced persons as well as the humanitarian sector as a whole. Co-evolution and the configurability of ICTs provide vehicles for understanding positive and negative effects. Emergence helps shed light on broader trends for the sector.

Technology and Systems

The term "information and communication technologies" encompasses a broad range of devices, applications and systems. For this analysis, they are broadly divided into two categories: those producing and capturing data and those transferring, sharing, managing and analyzing data.

The subsystems capturing data frequently serve as the foundation of the entire information architecture. In refugee services, the data captured during intake processes, such as manual database entry or iris scans, are used across an extensive range of operational functions. In particular, for the UNHCR, the proGres registration system, with its biometric identity management system (BIMS) module, captures data for millions of refugees. These records, and the associated identity numbers, can serve as the basis for extensive interorganizational data architectures (Maitland 2018b).

Data production and capture are also critical processes for individuals. As smartphone users, refugees produce their own data in the form of text, numbers, emojis, photos and videos. These multiple data-entry modes, video in particular, have implications for a range of system functions.

Once captured, back-end systems move data to where it can be most effectively used. Organizational units dedicated to information management, distinct from IT departments, help establish processes and policies for effective information sharing. For the UNHCR and other humanitarian organizations, information management has become more closely associated with program operations, as opposed to IT. Typically the units work together, but as the technologies become more closely aligned to programs, program staff control over them has increased (ibid.).

This structure of responsibility is a natural fit for humanitarian organizations, many of which, while being managed centrally by headquarters staff, provide local offices with a high degree of autonomy (Maldonado, Maitland and Tapia 2010). This autonomy can result in a patchwork of systems across an international organization (Maitland 2018a). While the patchwork is favoured by some due to its advantages for meeting diverse staff and program needs, others point to disadvantages for system integration and adherence to organization-wide policies (CartONG 2017).

The Social Context of Refugee Assistance

Amid technological changes, the social context of refugee assistance is shaped by the refugees and the humanitarian organizations providing assistance. In looking to the future, migration forecasts, of which refugees are just a small fraction, suggest continued growth. One stream of research on interregional migration views relative birth rates as a driving force (Hanson and McIntosh 2016). In Latin America, where birth rates are dropping, making them similar to those in the United States, migration northward is expected to decrease. In contrast, differences in birth rates between Europe (low) and Africa

(high) are expected to drive migration across the Mediterranean for decades to come.

If history serves as a guide, these broader migration flows will include refugees fleeing civil conflicts. The ongoing violence and persecution in the Democratic Republic of the Congo and a newer conflict in Cameroon are probable causes of forced displacement. Another factor contributing to civil conflict and migration is climate change. Peter Gleick (2014) analyzed the role of drought in the Syrian conflict. His analysis joins a chorus of others, including the US Department of Defense, in recognizing the role of climate change in contributing to civil unrest and mass migration.

Future refugees are likely to be different from those of the past, with higher levels of mobile phone ownership and basic technological skills and, hopefully, higher levels of wealth and education. Examining differences among current refugees can provide insight into the future.

Presently, 68 percent of global refugees come from just five countries: Syria, Afghanistan, South Sudan, Myanmar and Somalia (UNHCR 2018). Anecdotes from aid workers suggest, on average, that Syrian refugees are wealthier than many of their sub-Saharan counterparts. Absent reliable statistics, assessments are informed by indicators such as what the refugees left behind (cars, houses, reliable access to electricity and running water) and what they eventually have in the country of asylum (apartment, television set, satellite dish).

The relatively greater wealth of Syrian refugees positions them as harbingers of future technology use. In addition to giving them access to equipment (smartphones, laptops), their wealth generates higher levels of education and technology skills. One measure of these differences is the United Nations Educational, Scientific and Cultural Organization (UNESCO) adult literacy rate, which is 80.8 percent in Syria (2004) compared to 26.8 percent in South Sudan (2008).[2]

Further, where Syrian refugees have fled to Europe, the nearly ubiquitous telecommunications and power infrastructure provides a more complete future scenario. There, technologically equipped tech-savvy refugees are able to connect with one another across a variety of platforms as well as with host country nationals outside traditional aid structures.

In addition to changes in the numbers and characteristics of refugees, the social context of refugee assistance is defined by an evolving humanitarian sector. The humanitarian reform movement views the current system as fundamentally flawed, underpinned by outdated colonial frames and not fully embracing new technologies and means of organizing assistance. The movement's leaders argue for a greater emphasis on the involvement of local non-governmental organizations (NGOs), diversification in donor countries — which currently are predominantly in the West — and a greater recognition and perhaps integration of "new humanitarians," in the form of new or local NGOs (Barnett and Walker 2015; Sezgin and Dijkzeul 2015).

Along these lines, in 2016, the World Humanitarian Summit promoted a greater emphasis on mitigation, rather than on response; on local and regional organizations in these activities; and on innovation. During the meeting, the Global Alliance for Humanitarian Innovation was formed to "accelerate transformative improvements in humanitarian action by creating a shared space for the development of innovative tools, approaches and processes."[3]

This meeting was shortly followed by the 2016 New York Declaration for Refugees and Migrants of the UN General Assembly (UNGA 2016), which set in motion a commitment to reshape refugee and migration programs and policies. One of the first steps in this reform process is the development of a Global Compact on Refugees. The compact was presented at the fall 2018 UNGA by the UNHCR. The objectives of the global compact include: easing pressures on host countries; enhancing refugee self-reliance; expanding access to third country solutions; and supporting conditions in countries of origin for return in safety and dignity (UNGA 2018, para. 7). While frameworks are simply that and may take many years to implement, these goals can shape priorities and therefore constitute a critical element of the overall social context for refugee assistance.

Together, these evolving social and technological contexts, as seen through a social informatics

lens, serve as the foundation for this analysis. Building on that foundation and the author's more than 15 years of fieldwork and research at the intersection of humanitarian operations and ICTs, the paper proposes three key developments likely to emerge: the rapidly growing digital refugee; a sectoral evolution toward digital humanitarian brokerage; and the further growth of refugee digital self-sufficiency. All of these changes are already underway but will accelerate and play a more central role in humanitarian strategy and policy making in days ahead.

The Digital Refugee

In common parlance the term digital refugee has been associated with, typically, older, reluctant users of technology. It is used to juxtapose these outsiders with young "digital natives" as well as with "digital immigrant" learners. Here, "digital refugee" is used much more literally, denoting the digital representation of a person who, in the physical world, is a legally bona fide refugee. In a sense, the digital refugee is a shadow of the true physical refugee, suggesting the form but varying in the accuracy of the details.

This more literal notion initially arose from concerns over the use of biometric technologies by aid agencies (Jacobsen 2015). Concerns related to privacy and security in turn raised questions about extension of the "protection mandate." While this initial conceptualization evokes depictions of the digital refugee being assembled or constructed through centralized, bureaucratic systems, the reality is more complex. Data collected, stored and managed by humanitarian organizations through both centralized and decentralized systems is only one component. The digital refugee is being constructed continuously through a variety of data capture technologies, operated by a wide range of actors — organizations, networks, communities and groups, as well as individuals, including the refugee.

As such, the digital refugee is a complex, multifaceted construct that can be analyzed from many angles. Following Jacobsen, the focus here is protection. International humanitarian law and norms, in differentiating refugees from other types of migrants, creates protection responsibilities borne by host countries and

humanitarian organizations alike. Whether or not those protections exist, as the following discussion makes clear, the construction of the digital refugee is well underway.

To understand the processes discussed below, it is necessary to consider the various stages of refugees' experience and their associations with data (depicted in Figure 1). At each stage, the information needs of both refugees and humanitarian organizations are somewhat unique (Maitland 2018a). For example, during the departure and transit stage, information needs concerning routes, transportation, safety and costs are critical (Gillespie, Osseiran and Cheesman 2018). Next, in status determination a forced migrant presents their case, and associated data, to legal authorities in the process of refugee status determination (RSD) (Ruffer 2018). If status is granted, the refugee is registered and begins their life in temporary asylum. This stage has associated information needs related to accessing services and support granted to refugees. Finally, a refugee will be integrated locally in the host country, resettled to a third country or repatriated back to their home country. Each of these possibilities has its own associated information needs. While this depiction is a gross simplification, it serves to demonstrate the interactions between forced migrants, legal systems and the organizations involved in their management. Throughout, both refugees and organizations generate data, contributing to the construction of the digital refugee.

Digital Self-construction

Similar to many of us, some refugees contribute extensively to the building of their digital selves, while others are less engaged. Relatively mundane social media posts, messages to friends and family on WhatsApp and photos taken of everyday happenings all contribute to the construction. Less mundane are the digital traces of trauma, including geo-tagged mobile phone video evidence of displaced peoples' lived experiences in conflict, flight and exile.

For many years, insight into the process of digital self-construction has been provided largely by the rich body of scholarship on ICT use by resettled refugees. Through it, light is shed on ICT use in physical life as well as in separate lives online. ICT use contributes to refugees' social and economic integration, providing them with access to goods and services and maintaining

Figure 1: Refugee Life Cycle
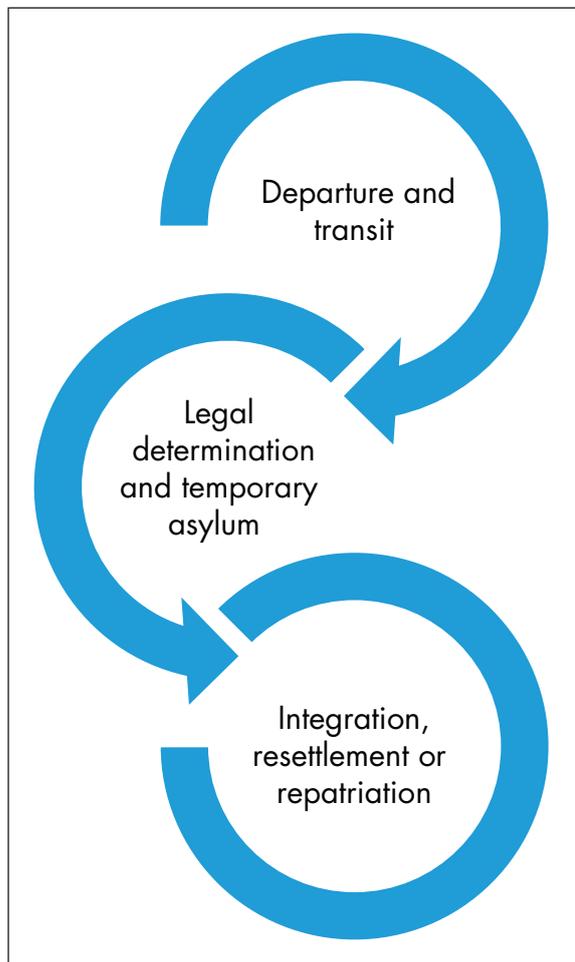
Source: Author.

ties with distant friends and family (Alam and Imran 2015). This use enhances the sense of "being at home" in a new community (Gifford and Wilding 2013), communicates cultural identity (Andrade and Doolin 2016) and maintains family relations (Robertson, Wilding and Gifford 2016).

In the exclusively online lives of refugees and forced migrants, activities take on a heightened importance, providing a freedom and connection difficult to find in physical lives characterized by cultural alienation, poverty and the loneliness of displacement. In this realm, online spaces play a significant role in the notion of "home" (Doná 2015). In this state, the materiality of connection devices becomes even more critical, and the devices themselves can come to constitute home. Similarly, work with asylum seekers in Germany found virtual or online interactions constitute a form

of "becoming" that is a transformation occurring through processes of self-presentation, co-presence and political mobilization (Witteborn 2015).

The self-construction of the digital refugee is implied by Karen Fisher's (2018) discussion of refugee information worlds. "Information worlds" — whether processes or places — refers to the sources of and the dissemination mechanisms for information, and navigating these worlds requires sourcing and sharing data that itself becomes a part or representation of the digital refugee. Further, the information worlds analysis includes reflections by refugees on the significance of mobile devices (ibid.). As such, it provides critical insight into the value of the data stored therein and further underpins the need for protection of the digital refugee. This protection includes assurances not only of privacy and security but also of storage and accessibility. In a physical world analogy, refugee protection is extended to possessions, providing shelter not only for the individuals but also for their belongings. Similarly, protection should be provided to both data representing the refugee and data owned by the refugee. The two are intertwined, with the latter a reflection of the former.

Digital self-construction is likely to have implications for both individuals and the refugee community as a whole. The nature and magnitude of these implications are influenced by forces creating limits to self-construction. Key among them is the increasing use of censorship by the authoritarian regimes that refugees flee. Refugees may also face censorship in host countries, particularly in those concerned with security. As an example, the Rohingya faced both: separate reports chronicle, first, the limitations on mobile phone ownership they faced while living in Myanmar (Sobhan 2018), and, second, the restrictions they encountered in Bangladesh, where, for a time, mobile carriers were prohibited from selling phones and SIM (subscriber identity module) cards to the newly arriving refugees (Agence France-Presse 2017).

Beyond the negative effects of losing access through censorship, there are negative implications of self-construction itself. Connectivity and social media use have increased refugees' vulnerability to trafficking and made refugees targets for misinformation (Gillespie, Osseiran and Cheesman 2018; Latonero and Kift 2018). Their mobile devices — which, as suggested above, may have even greater value to those on the move and without a

Figure 2: Digital Refugee Construction Process
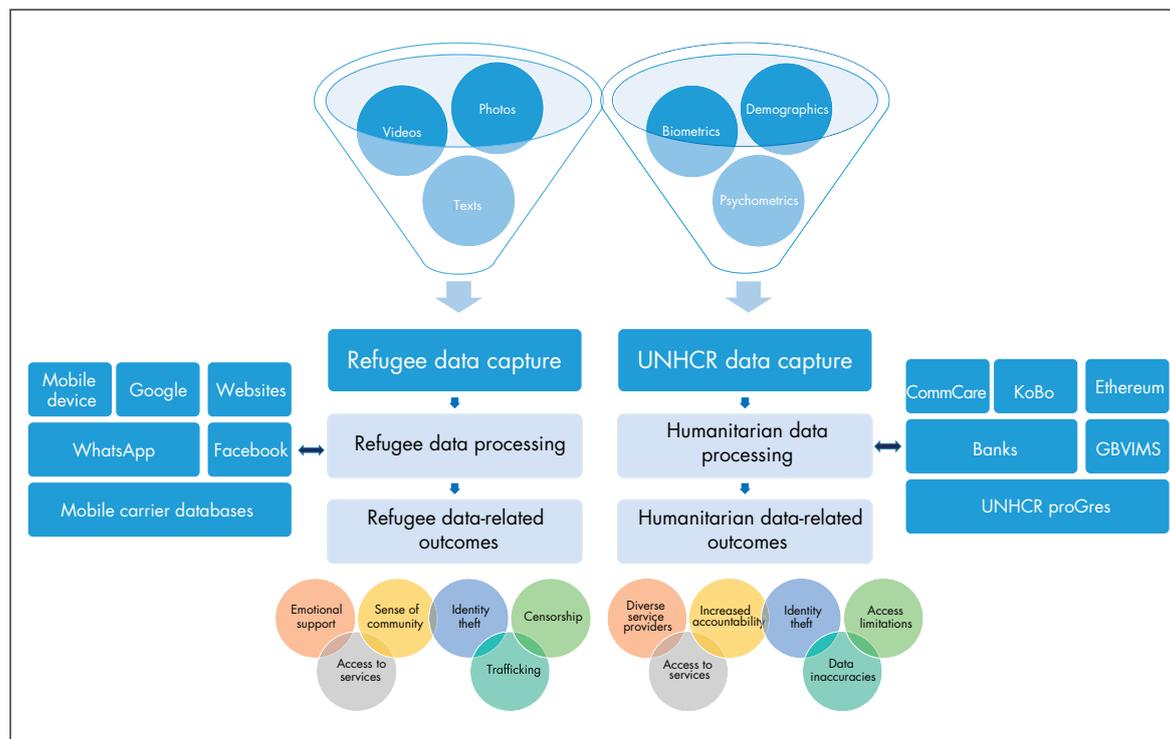
Source: Author.

Notes: GBVIMS = Gender-Based Violence Information Management System; UNHCR = UN Refugee Agency. KoBo and CommCare are mobile data collection and management platforms used in the humanitarian community.

home — are exposed to security threats (Maitland and Bharania 2017). The digital self-construction of Karen refugees in the United Kingdom, which involved posting content on blogs, exposed the community to online harassment associated with their persecution (Green and Lockley 2014).

Figure 2 depicts digital refugee self-construction, on the left, and humanitarian construction, on the right. The funnels reflect data capture processes for refugee and humanitarian organizations. Next, data are processed through a variety of systems, with a limited number of examples provided. For refugees, these include mobile carrier databases, websites, social media platforms and the refugees' mobile phone. Examples for humanitarian systems are discussed below. These processes, together with the policies of their operators and a variety of internal and external forces (not depicted here, for simplicity), shape both positive and negative outcomes.

The simplistic representation of Figure 2 suggests the complexity of these processes and the multitude of organizations and technologies involved.

Unsurprisingly, considering the protection of the digital refugee raises a number of complex issues. Many require more in-depth research in order to gain insight into even the most basic understanding along social and technical dimensions. For example, research should examine how digital self-construction affects refugees' coping mechanisms, emotional well-being and resiliency. Preliminary evidence from Syrian refugees in Greece suggests mobile phone use has positive effects on depression (Latonero, Poole and Berens 2018). Future research might explore whether youth are more engaged in digital self-construction or are merely passive users of ICTs, and, if they are more engaged, whether that engagement contributes to the isolation experienced by older refugees. To foresee the impact of technical change, research is needed on the value or contribution made by different tools and platforms. For example, how do personal maps, used to document a journey or as a reflection of or tool for navigating new places, affect an individual's sense of community? Finally, research is needed into how first-hand data, curated by forced migrants themselves,

contributes to or conflicts with data created or used in humanitarian organizations.

Humanitarian System Construction

As a partner in the construction, the humanitarian system contributes to the digital refugee's multi-faceted persona. The version of the persona created by these efforts has core components, such as demographic information stored in refugee registration systems. This data is reflected in additional, integrated systems as it is copied and shared. Important distinctions can be drawn between biometric data that is unlikely to change (sex, digital fingerprints) and demographic and biometric data that can and does change (marital status, weight). Psychometric data is also gathered, recording perceptions and experiences, for use in identifying relevant services and in monitoring and evaluation programs.

While many of these data types generate privacy concerns, biometric data in particular is a lightning rod. As well, even greater and more immediate harms may be caused by disclosure of other forms of information, such as sexual and gender-based violence. Refugees suffering these traumas may become targets for abuse or worse if their status becomes known. The special protections for these data led to development of a separate information management system, a joint effort of the UNHCR, the United Nations Population Fund and the International Rescue Committee, among others.[4] Further, simply having registered as a refugee serves as evidence of having left the country. This information can be extremely dangerous in the case of a military deserter. As it is difficult to assess which data could generate harms, protection of the digital refugee must be of broad concern.

Two questions making data protection more challenging surround, first, the integration of private firms in refugee services and, second, individual access to data. As systems for data sharing proliferate at international, regional, national and local levels, they are more likely to include private firms. These firms can provide expertise and efficiencies valuable to the humanitarian system. For example, as mobile money becomes more ubiquitous, humanitarian

systems are more likely to include banks and mobile carriers. Such systems have been rolled out in Jordan, Kenya, Uganda and Rwanda, among other areas.[5] Similarly, the WFP has begun to experiment with blockchain technology in its Building Blocks program. Begun in 2017, the initiative uses the Ethereum platform for transactions with refugees (Juskalian 2018). While these firms and platforms are entrusted with data by thousands of customers every day, it is an open question whether refugee data will be afforded special protections.

Further, as organizations collect more data, questions arise over refugee rights to these data. For example, when the UNHCR takes the digital fingerprint of a child, does the parent have a right to this data, or to a copy of this data? If so, what types of technologies facilitate transfer, storage and secure long-term management? Also, the data collected by the UNHCR, because the UNHCR is a state actor, is often available to host country governments. Can the same be said of data collected and stored by private firms operating in specific jurisdictions?

These questions, together with those concerning self-construction, are premised on an understanding of social and technical systems' mutual emergence. The digital refugee is forming due to the availability of lower cost devices and ubiquitous social media platforms, as well as individuals' and organizations' willingness to integrate these devices and platforms into their information worlds. The case of the Rohingya precisely demonstrates the co-evolution of technology ubiquity and government response to that ubiquity. The effects of the digital refugee project will vary, and as noted above can be either positive or negative, depending on multiple contingencies: the type of information, the type of system, who controls the system, and so on. Granular analyses, along the lines suggested above, are needed to generate further understanding of this trend.

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4   The Gender-Based Violence Information Management System; see www.gbvims.com for more information.

5   Personal communication, WFP, Regional Office, Nairobi, 2017. For example, despite the WFP providing the funding, its ability to analyze refugee transactions made via the mobile money system are limited by banking regulations.

Digital Humanitarian Brokerage

The growth of the digital refugee is simply an indicator of broader changes afoot. Alongside the broader changes in the humanitarian sector discussed above, pressure is building for change directly related to technology. The trajectory is now visible in three distinct phases.

The early phase emerged from growing use of data in humanitarian response. This development became particularly apparent in the response to the Haitian earthquake in January 2010. The widespread use of digital data and the greater use of mobile phones and internet-based assistance gave rise to the concept of "digital humanitarianism" (Conneally 2011). Next came the "digital humanitarians" (Meier 2015), a term that articulates a more expansive concept. It envisions a new set of actors, primarily the volunteer technical community (VTC), who have harnessed technological forces, ranging from crowd sourcing to machine learning to drones, and directed them toward humanitarian efforts. The new actors' efforts confront the organizational boundaries of established actors, challenging decision making and the role of externally derived information. These trends also are observed in domestic disaster response, with tweets and other social media data being integrated into formal governmental systems. New sources of data and assistance break down established notions of validity and expertise, and these VTCs and other new actors can serve as change agents.

In these two phases there is greater use of ICTs and appreciation for data, but the ownership and use of the data occur within largely static sectoral arrangements. In contrast, "digital humanitarian brokerage" extends digital humanitarianism, highlighting platforms' (for example, mobile data collection, social media) and data's role in transforming services, but taking it a step further to transforming the sector. This renewed sector will be better positioned to engage with digital humanitarians, more fully and quickly integrating their data and innovations. However, instead of merely adopting them into established organizational structures, digital humanitarian brokerage may require entirely new structures.

Digital humanitarian brokerage envisions a transition to a more flexible approach to providing humanitarian services (housing, food, education and so on). Where private sector actors, the host community or displaced people can provide a necessary service, humanitarian organizations can serve as intermediaries, prioritizing needs and distributing funds. Yet, unlike a traditional arm's-length broker, the humanitarian community must maintain its responsibility to fulfill its protection mandate. Part of its ongoing value will be monitoring markets and backstopping where failures occur. In some circumstances, brokering may be infeasible. In others, nearly all services will be brokered. Whereas current attention to digital brokerage has focused on data (Hellmann, Maitland and Tapia 2016), digital humanitarian brokerage focuses on services, typically provisioned through programs.

A highly stylized (and simplified) depiction (Figure 3a) shows the traditional structure of relationships among organizations involved in refugee programs, including international NGOs (INGOs) and local NGOs. In contrast, digitally brokered services (Figure 3b) include a more diverse group of providers offering services to refugees through the UNHCR. The figure also depicts refugees' direct digital connections to service providers (dashed lines), as well as refugees supporting themselves and one another.

The specific drivers of digital brokerage include:

→ increasing data sharing in the provision of humanitarian services, which underpins the brokerage process;

→ greater connectivity of refugees and the displaced, allowing them to access services as well as be located by service providers online; and

→ changes within the sector related to humanitarian reform and the need to be more open and flexible, and to recognize refugees not as beneficiaries but as partners.

These trends have already laid the groundwork for digital brokerage.

Examples of early forms of brokerage abound. As discussed by Galya Ben-Arieh Ruffer (2018), information used in RSD is brokered by the UNHCR to national RSD programs around the world (ibid.). The UNHCR vets information from a variety of

Figure 3: Contrasting Relationships in Traditional (a) and Digitally Brokered (b) Humanitarian Services

(a)

(b)
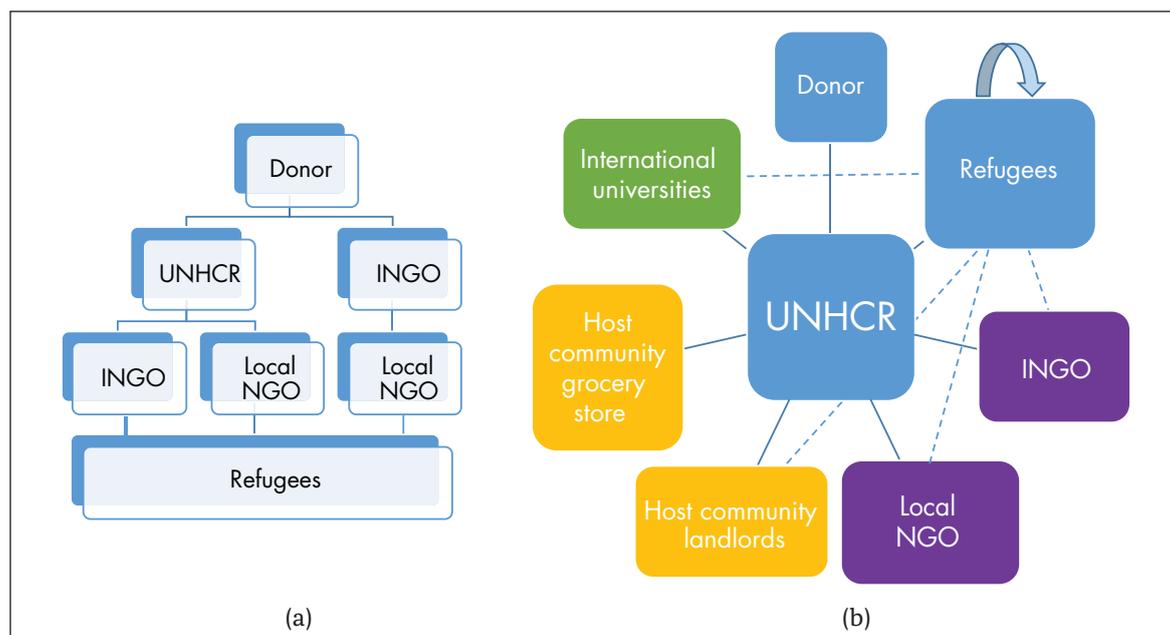
Source: Author.

Notes: INGO = international NGO; NGO = non-governmental organization; UNHCR = UN Refugee Agency.

external sources, providing a centralized portal via its www.refworld.org website. Similarly, the UNHCR's proGres registration database stores refugee ID numbers, which serve to connect data, coordinate services and account for spending across organizational networks (Maitland 2018b). The UNHCR provides this digital identifier brokerage to the sector.

The digital humanitarian brokerage trend is most clear in the move to digital cash programming (Maitland 2018c). The transition from in-kind aid, meaning the material resources of food, shelter and clothing, to providing digital cash is occurring through brokering services. All digital cash and voucher programs require coordination of services involving banks. However, the role of the WFP goes beyond coordination. It has the unique expertise required to monitor the market and to step in to provide food if digital service is failing. This expertise and protection mandate is fundamental to the WFP's successful digital brokerage.

In the spring of 2017, through a collaboration with students in the author's class, the UNHCR explored the potential of digital brokerage in worldwide offerings of university scholarships to Syrian refugees in Jordan. The project explored

the necessary properties for an online system that would allow nations, organizations and universities offering scholarships to post the offers on a portal. The portal would allow the UNHCR staff to vet the offers, ensuring adequate protections in the form of language training, availability of psychosocial support and a clear indication of the potential to remain in the country following the educational program. On the other side of the brokerage relationships, refugees would be directed to the online portal, accessible via mobile phone, to apply for positions. As a broker, the UNHCR would educate both the scholarship providers, on the needs and rights of refugees, and the refugees, on their rights. The need for such a portal became apparent because refugees had been directly engaging with educational institutions with both sides paying scant attention to rights and responsibilities.

This example highlights factors likely to shape the balance between brokering and direct service provision. In this example, the service — higher education — was being offered at a locale distant from the refugees' current home in temporary asylum, with no potential for a humanitarian organization to provide it directly. Hence, the UNHCR had the option to not participate. In

comparison, in the "digital cash for food" example, food was brokered rather than directly provided. However, there is much greater oversight required in this digital broker role, as compared to the scholarship example. In the "digital cash for food" programs, not only did the WFP "make the market" by vetting food vendors and designating the payment mechanism, it also continually monitored the market's food quality and prices. This enhanced broker role was necessary due to the humanitarian community's commitment to providing food and its association with physical well-being, while no such commitment has been made to providing higher education.

Digital cash and voucher programs are expanding to additional sectors, facilitated by the "multi-wallet" payment infrastructure. The multi-wallet enables multiple organizations to distribute cash to separate accounts through mobile phones. Once one organization establishes a multi-wallet, taking on the technical management, the bar for additional NGOs' participation is significantly lowered. This infrastructure's availability enables choices about where to broker and where to continue to provide direct services. Each humanitarian organization is likely to develop a continuum of service modes, ranging from fully "direct service provision" to fully "digital humanitarian brokerage," with hybrid arrangements as well.

Two additional forms of pure brokerage include finding locations for temporary asylum and forecasting migration. As information systems become more ubiquitous, the potential may emerge for the UNHCR to become more directly involved in refugee transit by brokering matches between forced migrants and countries willing to accept them prior to their departure (Ruffer 2018). In such a system, the UNHCR would qualify and register refugees, entering their case files into a system for global placement. This centralized process could potentially reduce the cost on states with nearby conflicts, who now bear a disproportionate share of the global displacement responsibility. It would also provide a better match between refugees and the needs and abilities of nation-states to offer protection. While it may seem far-fetched, the global decline in birth rates, discussed above, may

provide the impetus for countries becoming more open to receiving refugees from distant locales.[6]

In addition to adjusting established roles, digital humanitarian brokerage may open up or greatly expand existing services. For example, forecasting is often a value-added function of brokerage. In refugee affairs, it enables bringing together resources and service providers to meet the needs of the displaced in a timely fashion. Just as they are for other types of brokers, awareness of trends and foresight are key to the role, skills of perception that will be increasingly valued in a humanitarian community. Hence, they are likely to play an important role in digital humanitarian brokerage (Martin and Singh 2018).

Brokerage's role and ultimate effect on the humanitarian system will depend, in part, on the ability of humanitarian organizations to fully integrate new technologies across organizational boundaries. As highlighted by the examples of three distinct digital cash and voucher programs in Maitland (2018c), these deployments must be made with knowledge of the constraints and opportunities available in the local context. Research is needed to better understand the balance between local expertise and more centralized brokerage functions, as well as its impacts on service and those being served.

The concept of digital humanitarian brokerage is premised on an understanding of technical and social mutual emergence and their implications for sectoral change. As humanitarian reform and technological innovation create opportunities, organizational policies and technical design are likely to continue their co-evolution toward or away from brokerage. The path forward is likely to shape the nature of subsystems and their configurability. For example, systems can ease the means of providing temporary or restricted access to data (a configuration). These configurations, in turn, influence the extent to which digital humanitarian brokerage generates changes in different sectors (food; water, sanitation and health; protection,

shelter) within the humanitarian community. In turn, brokerage will have both positive and negative effects. Assessments categorizing effects as one type or the other will depend on one's vantage point. For example, if digital brokerage shrinks the UNHCR's mandate and role in refugee affairs, perceptions will differ between the organization's supporters and detractors. As above, the changes resulting from brokerage will affect the humanitarian community as a whole, as well as individual organizations and individual refugees.

Finally, policy responses to digital humanitarian brokerage require research on how these programs affect refugees. Would the displaced be better served by a large number of highly specialized and localized service providers, or do digital services brokered by centralized entities better promote high-quality service? Further, researchers should examine how digital humanitarian brokerage affects refugees both as a vulnerable population and as one embracing and enjoying online life and the agency it provides. On the one hand, regarding refugees as a vulnerable population, research is needed to explore how their general human rights, as well as their rights to security, privacy and even information itself, are affected by digital humanitarian brokerage. This research is particularly critical given the lack of citizenship-based protections, which contributes to the power differential resulting from refugees' poverty, trauma and need. The impact of policies stipulating protection of refugees' data will be determined by how effectively and consistently (both geographically and over time) they are implemented. On the other hand, regarding refugees as a population embracing digital life may serve as a natural platform for digital humanitarian brokerage. Research is needed on how refugees, as agentic users of technology, prefer to receive support and on what benefits and harms they foresee in an era of digital support provision. Extant research on digital cash programs suggests broad acceptance but harms as well. For instance, the WFP and the UNHCR abandoned a mobile money program due, in part, to the complications users faced in remembering personal identification numbers and securing their phones (Maitland 2018c). Such research can contribute to an understanding of the role of online life in displacement, generating important insights into how technologies help refugees overcome the spatial distance inherent in displacement. They can also inform program design, defining the elements of context requiring unique approaches and where more scalable solutions are appropriate.

Digitally Enabled Self-sufficiency

The Global Compact on Refugees identifies refugee self-sufficiency as a key objective (UNGA 2018, para. 7[ii]). To achieve this goal, it calls for improvements in legal frameworks that hinder refugee movement and employment. The concept of self-sufficiency is often narrowly interpreted as solely an economic issue, focusing on traditional livelihood programs. However, here the meaning is broader, including social support and the capacity for community problem solving.

In the context of the increasing digitalization of programs and services as well as of refugees' increasing use of technology, these tools can serve as platforms for and aids to achieving self-sufficiency. Indeed, refugees use mobile phones, internet connections and computing systems in their efforts to secure employment, access to resources and social support (Latonero and Kift 2018; Maitland and Xu 2015; Latonero, Poole and Berens 2018).

Among the many dimensions of self-sufficiency, employment or livelihoods is foremost in many refugees' minds. Internet-based employment can, theoretically, thwart the challenges of competing in the national labour market. However, these options have been slow to evolve. Yet, examples exist of refugees making their way, and an income, through online entrepreneurship or employment through small-scale platforms.[7] One of the hurdles to establishing more comprehensive online employment platforms for refugees has been international payments.[8] Mobile cash infrastructure allows transfers to refugees without bank accounts, but often the ability to transfer cash through the system is limited to partners of the organization establishing the system. The growing use of mobile payments by the humanitarian community and efforts to establish bank accounts for refugees may help overcome this hurdle. Some humanitarian mobile payment systems also include the vetting and training of vendors and shop owners who will

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7   For example, Mohammed Bashir Sheik, a refugee in Kenya's Dadaab Camp, designs websites (Okoth 2012).

8   The World Economic Forum (Charles 2017) presents the issue as remote work, tying it to broader employment trends. Syrian refugees in Jordan work remotely on Arabic language training.

accept mobile payments. With a mechanism to both receive and spend wages, some refugees could begin to see online employment as a viable option.

While economic dimensions of self-sufficiency tend to focus on the individual, psychosocial dimensions often require community support. For displaced communities, such support is tied to community development. Development at this level implies the community is aware of its own needs, and able to marshall the resources necessary to meet those needs. For individual members, the community's success in meeting these goals can be measured by the "sense of community" — a feeling of belonging and being important to each other, and a shared faith that members' needs will be met by their commitment to be together (Chavis et al. 1986). The concept includes an individual's ability to influence the community, a sense of membership, a shared emotional connection and helping individuals fulfill their needs.

In 2016 and 2017, the author, together with a team of US faculty and graduate students, worked with the UNHCR to develop a framework for connecting community development to information about the community. In traditional programs, humanitarian organizations collect and use refugee data, and then lock it in silos. Neither refugees nor other NGOs can access the data, which can provide important insights into the community's assets and skills.

In contrast, this program was designed such that the data was shareable from the point of collection. The goals were to train community mobilizers to work with community leaders and community-based organizations by providing them with access to the data needed for decision making. The program team made it clear, through interactions with the NGOs, the UNHCR and refugees, the level of change the program was targeting. At first, it was the organizations that needed to be reminded that the data was not being collected for their own use but for the refugees' use. At the same time, using participatory methods, the refugees had to be reminded that decisions about which data to collect and how to analyze it were solely theirs to make (Xu and Maitland 2017; 2019). Admittedly, this program was quite ambitious. While it successfully deployed the system and trained both camp-based and urban refugees, further training with refugee community-based organizations is needed to make effective use of the community data. In so doing, the project provided important insights into

the capabilities as well as limitations for broader community-centric data management processes.

In the meantime, there are digital refugee-run programs operating in various locales, demonstrating the breadth of digital self-sufficiency efforts. In Uganda, the Community Technology Empowerment Network (CTEN)[9] is an organization founded jointly by a South Sudanese refugee and a Ugandan national. When forced to flee South Sudan, leaving behind his IT training business, Peter Batali decided to create, in partnership with Ugandan Taban James Radento, an organization to improve ICT access and training within refugee settlements. The venture has slowly expanded its programs, staff and partners. CTEN is an example of self-sufficiency that spans several levels. It provides employment for its staff but also seeks to support the community more broadly. Through aid funding, it provides training to other refugees. Also, its staff serve as role models of self-sufficiency.

The success of CTEN is due, in part, to changes in the humanitarian sector. Traditionally, technology services would be provided by foreign-operated and foreign-funded NGOs. If a refugee organization was to be involved, it might receive a subcontract. CTEN has "disintermediated" this relationship, receiving the funding directly. This direct service provision is reflective of the forces behind digital humanitarian brokerage and, more fundamentally, of humanitarian reform, namely, the goal to include local NGOs.

One can find thousands of examples of refugee entrepreneurship. Yet, CTEN is different in that the business is in the high-value ICT sector; it is not merely a commercial enterprise but receives aid to provide training to refugees; and it is providing valued community services in a rural refugee settlement. This venture is a prime example of meeting both individual and community goals for self-sufficiency with a single project.

Again, the circumstances enabling digital self-sufficiency are underpinned by the co-evolution and emergence of technology and societal factors. On the one hand, easy-to-use mobile technologies and lower cost and more portable laptops have lowered the bar for obtaining and using technology. On the other, improved access to education and humanitarian reform are creating openings for

9   See http://ctenuganda.org/.

refugees to be viewed as partners rather than only as beneficiaries. Yet, the effects of digital self-sufficiency will be both positive and negative.

Through processes of co-evolution, the positive and negative effects of digital efforts will be influenced by systemic efforts at normalizing self-reliance, which themselves have both pros and cons (Easton-Calabria and Omata 2018). Not all refugees have the capacity to be self-reliant, as they struggle with psychological and physical trauma induced by conflict. Often, it is also the case that the skills that sustained a refugees' family in their homeland may not fit well with the local economy where they reside in temporary asylum. For example, a former rural farmer may find that land — or, more specifically, land appropriate for their traditional crop — is unavailable or economically infeasible in their host country. Further, the refugees likely to benefit from the changes discussed here are typically those with higher levels of education and valued skills. However, as technologies become simpler and less expensive, larger numbers of refugees could potentially benefit from ICTs.

Recommendations

More pervasive ICT use, together with forces in international migration and humanitarian affairs, is creating pressure for change. Some of the digital developments can only occur with supportive legal and policy frameworks; others may happen regardless of whether the humanitarian community acts or not. As the Syrian crisis demonstrated, refugees are able to self-organize and coordinate on the fly. Certainly, in the short run, the developments discussed in this report will disproportionately benefit the educated and technically savvy. Yet, the roles they play, the specific mechanisms by which they fulfill these roles and the precise extent to which they serve as harbingers of true change are unknown.

These questions point to the analysis's limitations, which are threefold: its focus on those with ICT access and abilities for effective use; perhaps appropriately, its bias toward refugee resilience focusing on technology; and its limited engagement with humanitarian and legal frameworks. Above, discussions of positive and negative effects consider those with access to mobile networks,

cellphones and, in some cases, more advanced technologies for data management and analysis. Yet, the digital divides both within and between nations persist (Norris 2001; Maitland 2018d). As demonstrated in a 2018 analysis of Uganda refugee settlements, universal access is a challenge not only for refugees but for the poor in rural areas (Maitland et al. 2018). However, access is only one dimension of a technology-based solution, as skills and appropriate content or services are also necessary for effective use (Eshet 2012).

Further, the discussion of refugee self-sufficiency emphasizes the role of technology and fails to draw upon broader notions of self-sufficiency and notions of resilience. Resilience is a broad concept that can be viewed through a systems lens, involving multiple interdependent levels. It also varies across cultures and is often associated with family and community structures (Panter-Brick 2014; 2015). The use of technology is also but one of many factors associated with socio-economic resilience, which can bring about changes, both positive and negative, for traditional gender roles (Ritchie 2018).

Due to limitations in scope, this analysis paid only scant attention to international humanitarian frameworks and laws and the crisis in accountability that the Global Compact on Refugees seeks to address. These efforts will most certainly shape the impacts of ICT-related changes. In each of the three developments (digital refugee, digital humanitarian brokerage and digitally enabled self-reliance), the legal and real-world context of refugees will have effects. It is only hoped that the benefits of ICT usage will outweigh the harms.

Tipping the scales away from harms will require concerted action; in response, this paper offers three recommendations for academics, advocacy organizations, humanitarian organizations and refugees alike. The recommendations reflect the tenets of social informatics through:

→ their focus on multiple levels of technology's effects;

→ the desire to balance information on benefits and harms; and

→ the forces of emergence that can change the positions of actors (in this case, refugees) in the system.

Recommendation One

First, the explosion of data underlying formation of the *digital refugee* requires policies that ensure securing not only refugee data and digital assets (phones, computers, access) but also refugee access to data collected from and about them. As suggested by the Rohingya example, some refugees have fled regimes engaging in censorship and surveillance, and programs should address fears and anxiety related to online activities.

Recommendation Two

Second, while all three trends can benefit from independent analyses, *digital humanitarian brokerage* and *digital self-sufficiency* would especially benefit. Whereas assessments from the UN Inspector General, such as that conducted on the UNHCR/WFP mobile payment system in Kenya (UNHCR and WFP 2015), provide independence from operations and help promote accountability, they are primarily concerned with organizational goals. Clear identification of the range of costs and harms incurred by refugees in the increasing transition to digital services are best left to those uninvolved in their implementation. Donors, foundations and research funding organizations should prioritize independent analyses by NGOs, think tanks, consultants and academics willing to assess and communicate the harms of digitalization.

Also, humanitarian organizations face significant incentives to adopt digital technologies as they increase efficiencies and reduce graft, as the aforementioned report from the Inspector General details (ibid.). Analyses, for example, of how digital self-sufficiency programs are harming those who lack skills or capacities to engage in them are best conducted by the aforementioned independent entities.

Finally, broad assessments of sectoral changes, such as those involved in digital humanitarian brokerage, are needed to guard against strategic behaviours by those potentially experiencing an erosion of power, namely, established UN and international NGOs.

Recommendation Three

The third recommendation is for processes — including digital policy formulation, digital program planning and evaluation, and assessments — to involve refugees as partners. Refugee involvement in these processes by UN agencies, INGOs and independent evaluators should move beyond gathering refugees' perceptions, to creating greater refugee involvement in their early stages. The involvement may require ICT training, yet that training can also benefit livelihoods. Treating refugees as partners will improve their position in terms of digital self-sufficiency. It can also increase familiarity with their rights and risks, protecting them from potential harms arising from increased digitization, such as receiving online offers of support from well-meaning yet misinformed philanthropists, or worse, those seeking to exploit vulnerable populations.

Conclusion

The analysis presented above is unique in its breadth, identifying trends affecting not only refugees but also humanitarian organizations and the community as a whole. The highlighted trends, namely, the digital refugee, digital humanitarian brokerage and digital self-sufficiency, span these levels. This multi-level perspective is the product of a social informatics lens. The lens perceives the significant technical and societal trends as co-evolving and occurring through processes of emergence. Understanding technologies as complex, multi-level and configurable provides the basis for anticipating positive and negative outcomes of new technologies. The recommendations offered above seek to minimize those harms, aiming to both maximize benefits and give refugees greater control over their lives.

Acknowledgement

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Our research programs focus on governance of the global economy, global security and politics, and international law in collaboration with a range of strategic partners and have received support from the Government of Canada, the Government of Ontario, as well as founder Jim Balsillie.

À propos du CIGI

Au Centre pour l'innovation dans la gouvernance internationale (CIGI), nous formons un groupe de réflexion indépendant et non partisan doté d'un point de vue objectif et unique de portée mondiale. Nos recherches, nos avis et nos interventions publiques ont des effets réels sur le monde d'aujourd'hui car ils apportent de la clarté et une réflexion novatrice pour l'élaboration des politiques à l'échelle internationale. En raison des travaux accomplis en collaboration et en partenariat avec des pairs et des spécialistes interdisciplinaires des plus compétents, nous sommes devenus une référence grâce à l'influence de nos recherches et à la fiabilité de nos analyses.

Nos programmes de recherche ont trait à la gouvernance dans les domaines suivants : l'économie mondiale, la sécurité et les politiques internationales, et le droit international. Nous comptons sur la collaboration de nombreux partenaires stratégiques et avons reçu le soutien des gouvernements du Canada et de l'Ontario ainsi que du fondateur du CIGI, Jim Balsillie.

About the World Refugee Council

There are more than 21 million refugees worldwide. Over half are under the age of 18. As a growing number of these individuals are forced to flee their homelands in search of safety, they are faced with severe limitations on the availability and quality of asylum, leading them to spend longer in exile today than ever before.

The current refugee system is not equipped to respond to the refugee crisis in a predictable or comprehensive manner. When a crisis erupts, home countries, countries of first asylum, transit countries and destination countries unexpectedly find themselves coping with large numbers of refugees flowing within or over their borders. Support from the international community is typically ad hoc, sporadic and woefully inadequate.

Bold Thinking for a New Refugee System

The United Nations High Commissioner for Refugees (UNHCR) led a consensus-driven effort to produce a new Global Compact on Refugees in 2018. The World Refugee Council (WRC), established in May 2017 by the Centre for International Governance Innovation, is intended to complement its efforts.

The WRC seeks to offer bold strategic thinking about how the international community can comprehensively respond to refugees based on the principles of international cooperation and responsibility sharing. The Council is comprised of thought leaders, practitioners and innovators drawn from regions around the world and is supported by a research advisory network.

The WRC explores advances in technology, innovative financing opportunities and prospects for strengthening existing international law to craft and advance a strategic vision for refugees and the associated countries.

The Council will produce a final report grounded by empirical research and informed by an extensive program of outreach to governments, intergovernmental organizations and civil society.

À propos du Conseil mondial pour les réfugiés

Il y a en ce moment dans le monde plus de 21 millions de réfugiés, et plus de la moitié d'entre eux ont moins de 18 ans. En outre, de plus en plus de personnes sont forcées de quitter leur pays natal et partent à la recherche d'une sécurité, et elles sont alors confrontées aux limites importantes qui existent quant aux possibilités d'accueil et à la qualité de ce dernier. À cause de cette situation, les réfugiés passent maintenant plus de temps que jamais auparavant en exil.

En ce moment, le système de protection des réfugiés ne permet pas de réagir adéquatement à la crise des réfugiés d'une façon planifiée et globale. Quand une crise éclate, les pays de premier asile, les pays de transit et les pays de destination finale se retrouvent sans l'avoir prévu à devoir composer avec un grand nombre de réfugiés qui arrivent sur leur territoire, le traversent ou en partent. Et le soutien fourni dans ce contexte par la communauté internationale est en règle générale ponctuel, irrégulier et nettement inadéquat.

Des idées audacieuses pour un nouveau système de protection des réfugiés

Le Haut-Commissariat pour les réfugiés (HCR) des Nations Unies a dirigé des efforts découlant d'un consensus et visant à instaurer un nouveau « pacte mondial pour les réfugiés » en 2018. Mis sur pied en mai 2017 par le Centre pour l'innovation dans la gouvernance international (CIGI), le Conseil mondial pour les réfugiés (CMR) veut compléter ces efforts.

Le CMR vise à proposer une réflexion stratégique audacieuse sur la manière dont la communauté internationale peut réagir de façon globale aux déplacements de réfugiés, et ce, en se fondant sur les principes de la coopération international et du partage des responsabilités. Formé de leaders, de praticiens et d'innovateurs éclairés provenant de toutes les régions du globe, le CMR bénéficie du soutien d'un réseau consultatif de recherche.

Le CMR examine les progrès techniques, les occasions de financement novatrices ainsi que les possibilités pour ce qui est de renforcer le droit international et d'y intégrer une vision stratégique pour les réfugiées et les pays concernés.

Par ailleurs, le CMR produira un rapport final fondé sur des recherches empiriques et sur les résultats d'un vaste programme de sensibilisation ciblant les gouvernements, les organisations intergouvernementales et la société civile.