

Technocolonialism: Digital Innovation and Data Practices in the Humanitarian Response to Refugee Crises

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Abstract

Digital innovation and data practices are increasingly central to the humanitarian response to recent refugee and migration crises. In this article, I introduce the concept of technocolonialism to capture how the convergence of digital developments with humanitarian structures and market forces reinvigorates and reshapes colonial relationships of dependency. Technocolonialism shifts the attention to the constitutive role that data and digital innovation play in entrenching power asymmetries between refugees and aid agencies and ultimately inequalities in the global context. This occurs through a number of interconnected processes: by extracting value from refugee data and innovation practices for the benefit of various stakeholders; by materializing discrimination associated with colonial legacies; by contributing to the production of social orders that entrench the “coloniality of power”; and by justifying some of these practices under the context of “emergencies.” By reproducing the power asymmetries of humanitarianism, data and innovation practices become constitutive of humanitarian crises themselves.

Keywords

colonialism, displacement, refugee/migration crisis, humanitarianism, digital innovation, big data, biometrics, hackathons

In February 2019, the United Nations World Food Programme (WFP) signed a US\$45 million partnership with Palantir Technologies, the US software firm known for its association with CIA and Cambridge Analytica and its work on predictive policing, advanced biometrics, and immigration enforcement.¹ The signing of this deal raised many concerns about whether Palantir will have access to the sensitive data or metadata of the 91.4 million people served by WFP each year. Questions were asked about the potential consequences for the privacy and rights of some of the world’s most vulnerable people. The opacity regarding the terms of the agreement prompted 65 civil society organizations and individuals to write a letter to David Beasley, WFP’s executive director, asking for “concrete steps to mitigate the serious harm arising from the agreement” and full transparency which is essential for meaningful accountability.² The collaboration between the world’s largest agency fighting hunger and the Silicon Valley firm mainly known for its intelligence and military links rightly caused much alarm, but in reality, the WFP–Palantir partnership is the tip of much larger phenomenon. There are thousands public–private partnerships in the humanitarian sector.

A few months earlier, in March 2018, the Vatican held a hackathon bringing together over 120 engineers and scientists

aiming to find solutions to social problems including migrant and refugee issues.³ The hackathon, titled VHacks, took place over 36 hr in a 15th-century palazzo in the Holy See and was co-sponsored by tech giants such as Google and Microsoft. The winning proposal from this particular event was a mobile application (app) for refugees. Some commentators were amused by the seeming contradiction of bringing together cutting edge technology and the tradition represented by the Vatican (Valdez, 2018). But if anything, VHacks reveals the current pervasiveness of hackathons for social good. According to recent estimates, there are over 1,500 apps for migrants and refugees (Leurs & Smets, 2018), most of which are hardly used. Most of these apps are the outcomes of the hundreds of hackathons which have taken place since 2015 in response to the refugee crisis.

These seemingly unconnected examples point to significant structural transformations taking place in the humanitarian

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field. Data and digital technologies have become central to humanitarian operations. Most UN agencies now have innovation labs and data departments. Refugee registrations by default involve biometric data which are outsourced to private vendors, part of the multimillion, rapidly expanding biometric industry. Large datasets are being used for needs assessment and the coordination of aid while artificial intelligence (AI) is being explored to track displaced people, and predict population flows and future crises. Datafication—the quantification of processes that were previously experienced qualitatively—and digitization are combined with increasing marketization, professionalization, pressure for humanitarian accountability, and, crucially, the dynamic entry of the private sector in the humanitarian field. The latter takes place largely through private–public partnerships but also through the work of private entrepreneurs, global philanthropy, and foundation work.

This article develops a new theoretical concept, technocolonialism, to critically examine the role of digital innovation and data in humanitarian practice. Empirically, the article focuses on the response to recent refugee crises such as the arrival of almost 1 million Rohingya people into Bangladesh⁴ as part of a larger study on the emergence of digital humanitarianism (Madianou, in preparation). The article draws on a mixed-methods study involving interviews with seven groups of stakeholders, participant observation in the spaces of innovation, and digital ethnography to critically unpack the role of digital innovation and data in the humanitarian response to recent refugee crises. The aim here is not to comprehensively report on the study, but rather to develop a theoretical concept through illustrative empirical examples.

Rather than assuming that data and interactive technologies democratize humanitarianism by facilitating beneficiary participation, I conceptualize innovation and data practices as integral to the power relationships among the stakeholders in the humanitarian field. I argue that digital innovation and data practices reproduce the power asymmetries of humanitarianism, and in so doing, they become constitutive of humanitarian crises themselves. The recent dynamic entrance of private companies, and technology companies in particular, into the humanitarian field further accentuates the above tensions. The merging of humanitarian aid with business interests signals a further marketization of humanitarianism. The concept of technocolonialism aims to analyze the convergence of digital developments with humanitarian structures and market forces and the extent to which they reinvigorate and rework colonial relationships of dependency.

The reworking of colonial relations of inequality occurs in a number of ways: through the extraction of value from the data of refugee and other vulnerable people; the extraction of value from experimentation with new technologies in fragile situations for the benefit of stakeholders, including private companies; by materializing the intangible forms and “ruins” of colonial legacies such as discrimination; by contributing to

the production of social orders that entrench the “coloniality of power” (Quijano, 2000); and by justifying some of these practices under the shibboleth of “emergencies.” Before I discuss the contemporary transformations of the humanitarian field, the following paragraphs address why colonialism provides a useful framework and how data and innovation have become central in the humanitarian sector.

Why Colonialism?

The choice of colonialism as part of the theoretical framework requires some explanation. Isn’t colonialism as “a practice of domination involving the subjugation of one people by another through military, economic and political means” (Mignolo & Walsh, 2018, p. 116) superseded by the now well-established independence of postcolonial states? I argue, drawing on colonial (Stoler, 2016) and decolonial theory (Mignolo, 2011; Quijano, 2000), that colonial inequalities endure and metamorphose in the contemporary context. Quijano (2000) developed the notion of the coloniality of power to explain how the subjugation of the colonized outlived direct colonial rule and exploitation. The dominance of Eurocentric knowledge systems and the codification of racial and social discrimination interweaved with the pervasiveness of global capitalism perpetuate social domination and explain the endurance of coloniality after the emancipation of colonized territories from empire (Quijano, 2000). For Mignolo (2011), coloniality is the “dark side of modernity,” the complex structure of management and control which underlies western civilization (Mignolo & Walsh, 2018, p. 125).

Some of these ideas intersect with Stoler’s (2016) seminal work on the durability of imperial formations in their tangible and intangible forms. For Stoler (2016), contemporary global inequalities are “refashioned and sometimes opaque reworkings [. . .] of colonial histories” (p. 5). Empires leave behind debris—and these ruins are durable and can be reactivated and reworked under different conditions, often in oblique and opaque ways (Stoler, 2016). Crucially, Stoler (2016) observes that these connections are often “occluded”—hidden—and thus mistakenly assumed to be new. The durable and hardened “ruins” of colonial pasts produce “imperial formations” (Stoler, 2016, p. 56) which are “processes of becoming and not fixed things” and thus distinct from empire which represents a fixed and readily recognizable form of sovereignty (Stoler, 2008, pp. 193–194). It is important to clarify here that the emphasis is not on a single or dominant sovereign empire but rather on the intangible “protracted processes that saturate the subsoil of people’s lives and persist over a *longue durée*” (Stoler, 2008, p. 192). This is an invitation to reassess contemporary colonial relations.

Several features of our globalized societies, from the acceleration of global capitalism to migration and displacement, can be traced to the colonial histories of which they

have been part. Colonialism, with its emphasis on the extraction of resources from minerals to labor, underpins global capitalism.⁵ Extractivism, which today extends to the mining for data and other immaterial forms of labor (Mezzadra & Neilson, 2019), is at the heart of colonialism. This link between colonialism, extractivism, and capitalism explains why my analysis draws on colonialism rather than the closely related notion of imperialism.

Migration and displacement are often the historical products of the aftermath of European colonialism (Bhambra, 2017, p. 402; Hegde, 2016; Khiabany, 2016, among others). For Stoler, migration and displacement are contemporary “imperial formations.” Recent migrations may not always follow established colonial routes, but are often the result of contemporary wars in which the United States, the United Kingdom, and other western countries have been engaged in, for example, in Iraq and Afghanistan. Crucially, the colonial order is reproduced through the racial subjugation of migrants, which is why De Genova (2016) argues that the European migration “crisis” can only be understood through “the enduring coloniality of power” (p. 75).

The tenacity of colonial inequalities can also be found in the continuities Stoler identifies between earlier formations such as 19th-century penal colonies and contemporary refugee camps. Displaced people today have become “the toxic refuse of our contemporary world” (Stoler, 2016, p. 337), taking the place of previous marginalized populations. Through the prism of colonial and decolonial theory, humanitarianism is understood as an imperial formation. Humanitarianism reproduces relationships of inequity between the western “saviours” and the suffering former colonial subjects, thus attesting to the enduring coloniality of power (Quijano, 2000). While there have been critiques about humanitarianism as a type of neo-colonialism (Rieff, 2002)—a form of control of less developed nations through indirect means—the connection between colonialism and humanitarianism is generally occluded under the imperative to “do good” and the context of emergencies.⁶ Paying attention to processes of occlusion reveals not only the legacies of colonialism but also the active role that digital practices play in revealing or hiding relationships of inequality.

There is a parallel discussion within the fields of Internet and cultural studies about the role of big technology companies, inequalities, and exploitation.⁷ Qiu (2016) has powerfully shown how the production of smartphones such as iPhones is based on the profound exploitation of Chinese workers at Foxconn factories. Colonial lineages can also manifest in technological obsolescence. The dumping of technology in poorer continents such as Africa is literally an imperial debris, littering poor countries (Cubitt, 2016; Gabrys, 2011). Globalization may account for the dumping of technological refuse, but to understand why it is dumped in Africa, we need an account of colonial durability. Furthermore, technology giants are likened to empires. Programs such as Facebook’s Free Basics—purporting to

give free Internet to poor people in developing nations—are colonial in their attitude to developing nations and exploitative. Free Basics claims to give “free” Internet to poor populations, when in fact it only gives access to a bare bones version of Facebook’s walled garden which includes a few handpicked apps. In return, Facebook can continue to grow by extending its reach and the company’s access to users’ data.⁸ The business model of contemporary social media is based on the provision of “free” services in exchange of extracting personal data, which are sold to advertisers while furthering tech companies’ authority over the production of knowledge (Vaidhyanathan, 2018) and capacity to influence behavior (Zuboff, 2019). Such phenomena are popularly referred to “digital colonialism.” More recently, the term “data colonialism” (Thatcher, O’Sullivan, & Mahmoudi, 2016; see also Couldry & Mejias, 2019) has received attention, emphasizing data as a form of capitalist expropriation although some of these arguments gloss over the structural asymmetries between the global north and south which are at the heart of the notion of technocolonialism.

The following paragraphs consider the uses of data and innovation in the humanitarian field more specifically.

The Promise of Technology: Digital Innovation and Datafication

With over 135 million people across the world needing assistance in 2018, the humanitarian sector faces significant challenges. One of the driving forces behind the focus on innovation and (big) data initiatives is the expectation that they can provide solutions to some of these complex challenges. As we will see in the next section, innovation projects are also driven by the private sector. As a result, “innovation” seems to be ubiquitous: major agencies have innovation labs, funding applications are often expected to include an innovation element, while innovation was a designated main theme for the 2016 World Humanitarian Summit (Sandvik, 2017). A close reading of the various systematic reports reveals that innovation is often synonymous with digital or data developments and underpinned by a progressivist and deterministic understanding of technology “that identifies, adjusts and diffuses ideas about improving humanitarian action” (Obrecht & Warner, 2016). Innovation is linked to experimentation and risk-taking which is particularly problematic when applied to vulnerable populations such as refugees. I understand innovation as the result of a mutual shaping of social, political, and technological processes which often preserve institutional orders (Suchman & Bishop, 2000). Innovation and data practices are closely linked as digital innovation projects produce data, while innovation is often aimed at improving the efficiency of data management, while itself often resulting from complex data modeling.

Big data are large datasets which are computationally readable and manipulable. Data derive from a variety of sources including social and mobile media, sensors, and

satellite feeds. The abundance of such datasets has been key for the rise of practices by remote volunteers as well as humanitarians who aim to map disaster damage and assess the needs of people in emergencies (Meier, 2015). Big data are seen as representative of the voice of affected people despite significant critiques about the epistemological, ontological, and ethical limitations of crisis data (Crawford & Finn, 2015). For example, big data during disasters often exclude data from those most affected by a crisis, therefore reproducing inequalities. The lack of representativeness and the presence of temporal and other bias render the use of big data during emergencies potentially harmful (Crawford & Finn, 2015). Another important development here concerns the central role of private companies in the collection and ownership of large datasets—as opposed to states which traditionally were associated with data collection (see Taylor & Broeders, 2015, for parallel observations in the development context). This represents a significant shift as data ownership is associated with monitoring and surveillance powers while it also raises accountability and ethical issues. Apart from large datasets, smaller data, such as those containing beneficiary data, are becoming central to the work of humanitarian agencies. Data management has become a key component of humanitarian operations which is why the article focuses on data practices as opposed to data as an object. By shifting the emphasis from data to datafication, I am able to explore the power relations associated with data practices. Combining colonial and decolonial theory with critical data studies explains the structural conditions that enable datafication rather than focus on the limitations of data per se.

The Rapidly Changing Humanitarian Sector: Five Logics

The development of the term technocolonialism acknowledges that phenomena like displacement, migration, refugee camps, humanitarianism, and the development of digital technology itself are steeped in colonial relations of inequality. Technocolonialism shifts the attention to the constitutive role that data and digital innovation play in entrenching inequalities between refugees and humanitarian agencies and, ultimately, inequalities in the global context. How does the digital rework and revitalize “imperial debris” (Stoler, 2008)? Do digital interventions make tangible the previously intangible, do they reveal or further occlude histories of exploitation? I argue that digital technology and data practices materialize the intangible forms and debris of colonial legacies. Furthermore, inequalities are entrenched by the extractive nature of technocolonialism. As the empirical analysis will reveal, beneficiaries produce value through data practices which is then extracted for the benefit of the various stakeholders.

To understand the consequences of data and innovation for humanitarian practice, I situate my analysis within a rapidly transforming field characterized by five competing logics. The

intersection of traditional humanitarian actors and donors, private companies, and digital volunteers gives rise to these logics. One factor driving digital developments is the need to address the long-standing power asymmetries within humanitarianism. The *logic of humanitarian accountability* assumes that interactive technologies will give voice to affected communities to hold aid agencies to account. The logic of humanitarian accountability is at odds with a second *logic of audit*, which recognizes the potential of technologies and data as metrics for audit which donors demand. The entry of business interests in the humanitarian space signals a *logic of capitalism*, while the popularity of collective problem-solving events such as hackathons indicates a *logic of solutionism*—the idea that technology can solve complex social problems. Finally, the logic of securitization focuses on rendering refugees as security threats and how technology can protect state sovereignty. These are analytical distinctions; in practice, the logics intersect and engender new, hybrid discourses about technology and social change. But let us first examine each logic separately before exploring their intersection in the second part of the article.

The Logic of Humanitarian Accountability

The enthusiasm for digital innovation within humanitarianism can be partly understood as a response to the ongoing demand for humanitarian reform and accountability. Humanitarianism has been criticized for reproducing the asymmetrical power relationships on which it is based (Terry, 2002), for disrupting local solidarities and creating new dependencies (de Waal, 1997) leading some commentators to argue that humanitarianism is a form of neo-colonialism (Rieff, 2002). Digital platforms are seen as answers to the above problems: the interactive nature of platforms is assumed to give voice to displaced and marginalized people and to enable their participation with an aim to ultimately correct power asymmetries and strengthen accountability to affected people (for a critical discussion see Madianou, Ong, Longboan, & Cornelio, 2016).

Developments in big data have further accentuated the optimistic discourse about a “new era of humanitarianism” (Meier, 2015; UNOCHA, 2013). Datasets derived from social and mobile media are assumed to reveal the needs of disaster-affected people thus contributing to the democratization of humanitarian response by correcting the power asymmetries on which it is based (Meier, 2015; UNOCHA, 2013). According to the recent reports, the involvement of people in their own recovery—through their data—leads to enhanced accountability and a “rapid decentralization of power” (World Disasters Report, 2013). Apart from data mined from social and mobile media, humanitarian organizations increasingly collect their own datasets often through dedicated software packages such as Kobo Toolbox. Accountability initiatives are typically interpreted as feedback mechanisms, which are increasingly digitized using messaging apps such as Whatsapp (ICRC, The Engine

Room, & Block Party, 2017), or dedicated platforms developed in-house. Large datasets underpin the development of AI applications which are claimed to predict future emergencies and population flows. Even though the field of critical data studies has compellingly demonstrated the ontological and epistemological limitations of big data (lack of representativeness and objectivity, temporal and spatial bias among others; see Crawford & Finn, 2015), such critiques have not dampened the enthusiasm for digital innovation for humanitarian reform and accountability.

The Logic of Audit

The second logic which drives the enthusiasm for interactive technologies in the humanitarian field is at odds with the logic accountability and reform. If the first logic involved the criticism, the deficiencies of humanitarianism, the second logic derives from its phenomenal success. The field has grown hugely over the last two decades with the global aid relief economy estimated at US\$156 billion (IRIN, 2015). This significant growth is explained if we consider structural factors such as the withdrawal of nation states from service provision, which they outsource to agencies (Stein, 2008). Nation states remain involved as donors, which in turn demand evidence of impact such as metrics provided by digital technologies (Madianou et al., 2016). The increasing marketization of the field, whereby agencies compete for funding, explains the enthusiasm for digital technologies. The short cycle of funding exacerbates the reliance on metrics and “impact data” as agencies need to constantly justify how many people they have reached. Digital technologies, metrics, and data become the means through which agencies can secure funding and justify their presence in the field (Krause, 2014; Madianou et al., 2016). Populations in need—through their data—legitimate humanitarian projects and justify agencies’ funding applications to national governments and other donors. Furthermore, data and innovation are seen as opportunities to enhance the efficiency and transparency of humanitarian operations as is evident in the use of biometric registrations which were introduced by the United Nations High Commission for Refugees (UNHCR; 2002) to combat low-level fraud. The use of data and innovation in this context is driven by the logics of audit and efficiency—rather than accountability. The logic of audit reveals an instrumental relationship between agencies and beneficiaries which instead of reversing power inequalities serves to sustain them (Madianou et al., 2016). Such processes are not unique to humanitarianism which has been affected by neoliberalism and an explosion of a culture of audit just like most sectors of public life (Strathern, 2000).

The Logic of Capitalism

The WFP–Palantir partnership is one of thousands of public–private partnerships in the humanitarian space since 2010.

Almost all major tech companies have developed partnerships with United Nations and other agencies: Accenture, Amazon, Facebook, Google, IBM, and Microsoft to name a few. Corporate giants such as Mastercard have collaborated with some of the largest humanitarian or intergovernmental agencies to improve the efficiency of cash transfers and aid distributions. Many of these initiatives rely on the use of biometric data such as eye irises, which are used for the identification of beneficiaries. A number of issues arise from such private–public partnerships: Who owns the sensitive personal data? If the software used to collect and process data is privately owned, does the corporation own the data? If the hardware and technological infrastructure used to collect biometric data is designed and owned by a private corporation, does that company have access to the data? It is worth noting that such data are so rich and detailed that some years ago not even governments would dream of having access to. These concerns became particularly acute when mobile operators shared their users’ data with non-profits like Flowminder and other NGOs during the Nepal earthquake and the Ebola epidemic leading Sean McDonald to refer to “Big Data Disasters” (McDonald, 2016). The ontological and epistemological limitations of crisis data (Crawford & Finn, 2015) are compounded by the fragility of political and legal systems where aid takes place.

For private companies, the involvement in humanitarian projects represents excellent branding and public relations (PR) opportunities with further potential benefits, such as increased visibility, access to new markets, access to data, and opportunities to pilot new technologies. A well-known critique of corporate social responsibility (CSR) is that by cloaking the market in a moral discourse, it offers companies a veil for profit-making. However, my fieldwork reveals that the motive for profit is not necessarily concealed. During industry events such as GSMA’s Mobile World Congress, telecommunications representatives openly discuss the business opportunities presented through technology for social good initiatives. The opportunity for profit making is also acknowledged in press headlines such as the following from the *Financial Times*: “Refugee camps are an untapped opportunity for the private sector.”⁹

Providing a veil for profit-making is not the most interesting dimension of the logic of capitalism. What matters more is the way in which private companies can extend their authority over the social order. Foundation work and CSR create opportunities for companies to pursue their political and social objectives. As Rajak (2011) observes, by turning themselves into agencies for development and humanitarianism, corporations are able to reframe political problems in line with their own business objectives (p. 13). To render displacement, which is a political problem, as an issue with a “mobile connectivity” or “technological” solution is to depoliticize displacement while advancing a business agenda. It is in this sense that corporations extend their power over the social order.

The Logic of Solutionism

Solutionism, the desire to find technological solutions for complex social problems, is evident in several initiatives including the work of “digital humanitarians,” the thousands of volunteers who offer their skills and expertise through hackathons, or in the crowdsourcing of disaster mapping exercises (Meier, 2015). While the incredible amount of volunteer labor is very impressive (Dittus, 2017), a closer look suggests that several of these events are too focused on innovation, rather than the understanding of the actual humanitarian problems. Hackathons, which started as corporate events, have become popular in the development and humanitarian sectors (Irani, 2015) and have been widely used in the response to the so-called European migration crisis.

The prioritization of technology is evident when looking at hackathons’ winning criteria. The Vatican Hackathon which opened this article employed 10 criteria under four broad categories, namely, impact (the identification of the problem, proposed solution, and impact it will have), viability (the underlying business model and plans for future growth), technology (level of innovation, the complexity, and quality of code), and finally presentation.¹⁰ Techfugees, a non-profit dedicated to finding solutions to refugee issues, employs the following criteria in its hackathons: the relevance to the needs of refugees; financial culture, legal, and operational feasibility; impact; the degree of disruption and/or innovation; and, finally, scale-up potential.¹¹ Only one out of the 10 VHacks criteria—and one out of five in the case of Techfugees—is about the actual problem of displacement suggesting that the solution and its commercial viability are heavily prioritized. The emphasis on the “level of innovation and disruption” speaks volumes about how the shiny cart of technology is put before actual social and political problems. It is striking that “disruption” is one of the success criteria: how can the Silicon Valley mantra “move fast and break things” be applied to politically sensitive and potentially fragile situations? Yet, the mantra of disruption is evoked time and again. Josephine Goube, CEO of Techfugees, stated in her opening plenary to the SXSW industry conference in Austin, Texas: “If tech disrupts people’s lives, we are going to disrupt the lives of the people (refugees) who are in the most need of disruption.”¹² This quote echoes mainstream views on innovation from within the humanitarian sector:

The exploratory and uncertain nature of innovation, means that some degree of failure is inherent [. . .] Organisations and donors will need to become less risk averse and embrace *failing fast* in order to support improvement. (Obrecht, 2016, emphasis added)

The notion of disruption and “failing fast” is particularly troubling when one considers the fragile environments where innovation takes place. “Failing fast” in a refugee camp can have devastating consequences for displaced people and is at odds with the core humanitarian principle: “Do

no harm.” Coupled with the logic of capitalism, the logic of solutionism can extend to the normalization of technological pilots, or experiments among vulnerable populations, to test new technologies and create hype around certain innovations (Jacobsen, 2015; Madianou, 2019).

The notion of disruption is particularly troubling when combined with a lack of engagement with the socio-political context concerning displacement. Goube’s talk at SXSW started with a disclaimer about how she did not intend to talk about politics or advocacy, but rather only focus about how technology can help. This decoupling of understanding and action exemplifies Chouliaraki’s notion of post-humanitarianism which refers to solidarity without the moral and emotional weight which accompanies the deep engagement with distant suffering (Chouliaraki, 2013). The self-referential dimension of post-humanitarian action becomes evident in recent critiques of hackathons as the spaces for the production of entrepreneurial subjects (Irani, 2015) and as “a great way to build networks, strengthen communities and reinforce beliefs in common goals” rather than actually help displaced people (Geber, 2016). Hackathons exemplify the post-humanitarian disposition of “feeling good” about oneself.

The Logic of Securitization

The fifth logic centers on the role of the state. The logic of securitization complements the other ways in which states become involved in humanitarian operations (e.g., as donors). Securitization is particularly relevant in the response to migrant and refugee flows. Migration in the post 9/11 context has been interpreted as a security problem (Bigo, 2002) as was particularly evident in the response to the so-called European refugee crisis of 2015, which was largely driven by the aim to secure borders. The logic of securitization reduces refugees to a security threat (Anderson, 2014, p. 68) which is driven by ideological agendas that confirm the monopoly of the state as the provider of security while concealing “some of its own failures” (Bigo, 2002, p. 65).

The securitization of migration has been heightened by the proliferation of technologies of surveillance and control (Bigo, 2002). Securitization would have been impossible without digital systems of surveillance and data infrastructures. Also key is the expansion of the security industry, with the biometrics sector, which has grown enormously since 9/11, a case in point. States increasingly use biometrics as a way of controlling borders and keeping out “undesirable” populations. It is widely acknowledged that host governments often have data sharing agreements with intergovernmental agencies such as UNHCR which always operate under state jurisdiction (Jacobsen, 2015). UNHCR often conducts biometric registrations together with national governments. The sharing of sensitive data raises concerns about “function creep,” which refers to the way that data collected for one purpose (e.g., refugee registration) may end up being

used for an entirely different purpose (e.g., state surveillance) (Ajana, 2013b).

The Empirical Study

Before I illustrate how these logics intersect in current innovation and data practices, some context about the empirical study is necessary. The article is part of ongoing research, one of the first studies to bring together seven groups of stakeholders to understand the role of data and innovation in the humanitarian sector. The multi-method study includes (1) 37 semi-structured interviews with seven groups of stakeholders (donors, humanitarian organizations, government representatives, private entrepreneurs and business representatives, digital developers, volunteers, and affected people themselves), (2) participant observation in the spaces of innovation (such as hackathons and innovation labs), and, finally, (3) digital ethnography.

Fieldwork took place between July 2016 and May 2019 and interviews took place primarily in London, New York, Athens, and Washington, D.C. Several participants in overseas missions were interviewed via videocalling platforms. Interviews lasted 60 to 90 min on average and were recorded, transcribed, anonymized, and analyzed thematically. Digital ethnography (Pink et al., 2016) enabled me to immerse myself in the online spaces where humanitarian data and innovation are debated and reported. The article draws on secondary sources such as blogs and dedicated websites, videos, podcasts, social media content, and other archival material, which provided important contextual information. Given the global reach of the object of study, having access to various developments remotely has been vital for following what is a rapidly changing field.

Intersecting Logics and the Reworking of Colonial Inequalities

I will now move on to illustrate how these five logics intersect in current innovation and data practices while revitalizing and reworking the asymmetries of colonial relations. The distinction between the different logics is analytical. In practice, the five logics intersect creating a dynamic, which I theorize as technocolonialism. Technocolonialism operates along a continuum. Not all innovations are problematic, while some are more problematic than others. The aim here is not to present an exhaustive review of all technological and data interventions in the humanitarian response to refugee flows. Rather, my objective is to develop a theoretical concept, supported by illustrative examples, which will help explain current practices in the humanitarian field.

Technocolonialism as Extraction

The first example which brings together several of the above logics concerns a recent trend among traditional humanitarian agencies to develop apps to facilitate their accountability

to and communication with displaced people. Feedback mechanisms have become synonymous with “accountability to affected people” (Madianou et al., 2016). Feedback mechanisms are increasingly digitized using platforms which aggregate comments into large datasets. Until recently, it was common for agencies to invite feedback via SMS (Madianou et al., 2016) while commercial messaging apps (such as Whatsapp) have also been used (ICRC et al., 2017). Some agencies have developed their own bespoke apps for feedback capture. The example discussed here concerns such an innovation produced by a major intergovernmental agency and illustrates how innovation and data are interlinked: in this particular case, the product of innovation is meant to quantify and manage beneficiary data.

At first level, like most feedback mechanisms, the app follows the logic of accountability which aims to address the power asymmetries of humanitarian operations by giving voice to affected people. The app, which has been used in Cox Bazaar in Bangladesh as part of the Rohingya response, aims to capture the feedback of refugees in relation to the aid they receive. The app which can be installed on a smartphone invites refugee to submit their comments or short video; this feedback is subsequently uploaded via the app onto a secure server. While the app seems to follow the logic of accountability, a closer look suggests that there are other objectives at play. The website for the app lists three clear objectives:

- Track outputs more effectively by mapping information gathered via SMS, surveys, and other communication channels.
- Monitor the progress of a project using an easily accessible online database and maps.
- Share project outcomes visually with colleagues, government partners, donors, and other stakeholders.

Even though accountability to refugees is seemingly the app’s core objective, refugees are conspicuously absent from the listed objectives. The above list suggests that that feedback is directed to donors and government partners who demand evidence of “impact.” Furthermore, feedback data streamline the management of “the project,” that is, the distribution of aid to refugees, revealing an emphasis on efficiency. Datafication increasingly serves the logic of efficiency and audit rather than the imperative of humanitarian reform and participation. While audit took place through earlier analogue mechanisms such as the logframe or surveys, the replicability of digital data systems accentuate the emphasis on audit (Madianou et al., 2016). In this example, we can see how data have become a new currency: the datafication of humanitarianism reveals that the flow of aid is not just directed from donors and agencies to “beneficiaries.” Beneficiaries, through their data, legitimate the work of agencies and donors. This would not necessarily be a problem if the feedback provided by refugees was acted upon. However, recent research has revealed a sharp disconnect between feedback collection and

acting on beneficiary concerns (Madianou et al., 2016). This disconnect is confirmed by some of my interviewees from within the aid community:

These are not real feedback mechanisms. They are built to suck from communities. I call them “sucking apps.” But if it was real feedback, it should give back to the communities. That’s why it’s called feedback and not feed-in or feed-from.

The interviews reveal that there are several motivations for feedback innovation, often involving a range of audiences apart from the intended recipients (i.e., the refugees). The marketization of humanitarianism and the intense competition for funding explains the prevalence of the logic of audit. The following quote from one of my participants suggests that competition between agencies is as, if not more, important than the logic of accountability, in the inception and design of digital platforms.

Part of our motivation was the desire to improve our visibility—to show to other organizations what [our agency] does.

Competition does not only take place among agencies but also within large organizations, where different divisions compete for visibility and funding from the center. Speaking about another app, one of my participants remarked,

Our main purpose through these projects, I’m not going to lie, was to prove a point [within the organization] or to skill up globally, nationally or regionally. [The app] was an example of proving a point.

Agencies are also in competition with the private sector and especially technology companies. An officer involved in the development of another app said,

We wanted to gamify our relationship with migrants. We need to be the disrupters, not the disrupted.

In this revealing quote, gamification, typically associated with persuasive computing and behavior modification experiments, is used to refer to the introduction of game elements into non-game situations. Here, the assumption is that refugees will find the interaction with the app more fun and will be more likely to engage with it and, therefore, provide their data. Revealingly, gamification has been described as exploitationware (Bogost, 2013). The beneficiary here is not the refugee, but the app distributor. Turning feedback into a fun game may produce more refugee data, which in turn can provide stronger evidence for further funding. To paraphrase Monika Krause (2014), refugees are not the end but a means to an end—the end being the continuation of funding in a competitive, marketized environment. Refugees produce value through their data which is then extracted to justify the funding of aid projects. Digital practices and datafication amplify the logic of audit and attendant marketization.

The above quote also reveals the anxiety not to be left behind by other “disruptors” such as private tech companies. The logic of solutionism exemplified in the mantra of disruption and “failing fast” has been naturalized to the extent that it is taken for granted. The discourse of disruption is very problematic when applied to potentially fragile environments such as displaced populations. And yet, the discourse of innovation for social good is increasingly dominated by a desire to treat the camp as a laboratory for innovation as is evident in the following quote taken from a public talk by a senior officer from WFP’s Innovation Accelerator.¹³

After the bootcamp the best start-ups can get funding from us from 50,000-100,000 USD to pilot the idea in a developing world context. Our role is to do the matching. . . we will connect you to one of our offices around the world and part of the funding will be to go and test it on the ground in that field capacity. . . . We will continue to give you mentoring and help you think of your business model as you go forward.

Using the refugee camp as a testing ground for innovation is yet another example of the extractive nature of techocolonialism. The risks of experimentation are outsourced to some of the most fragile environments in the world with value extracted for the benefit of stakeholders including private entrepreneurs and large companies.

There are many critical voices from within the humanitarian field which challenge some of these discourses and practices. As one of my participants stated, “we do things that might get us a Nobel price in Africa—but which would get us arrested in Europe. Affected people are treated as guinea pigs.” This observation about the exploitative nature of innovation, experimentation, and data practices echoes Sean McDonald’s argument about big data disasters. McDonald (2016) drew on the sharing of users’ personal data by mobile networks during the Ebola crisis to highlight the asymmetries between the African and European contexts in relation to data and privacy safeguards. Similar concerns have surfaced recently regarding the biometric registration of the Rohingya refugees in Bangladesh.

Materializing Inequalities: Biometric Refugee Registrations

Biometrics, the technology for measuring physiological characteristics such as the iris and fingerprints, has become the default method for registering refugee populations with UNHCR (2019) aiming to have all refugee biometric data in one single population registry called PRIMES by the end of 2019. More recently, biometrics were widely used in the 2017/2018 Rohingya refugee crisis. As is typical with biometric enrolments, the Rohingya registration involved the state (in this case, the Bangladeshi government), UNHCR, and the private sector. The Rohingya registration was outsourced to a private contractor, which captured biometric data

together with personal information and combined both on an identity card. We can discern the logics of securitization, audit, accountability, and capitalism behind the adoption of biometric registrations. Biometrics are claimed to keep borders secure by screening undesirable bodies. UN agencies initially adopted biometrics to tackle low-level fraud (Jacobsen, 2015), but increasingly justify biometrics as a way to improve the delivery of aid (Madianou, 2019). Finally, the direct involvement of the profitable biometric industry reveals the strong presence of the logic of capitalism.

While biometrics is assumed to be an objective identification method, there is ample evidence that it codifies discrimination. Biometric technologies “privilege whiteness” (Browne, 2015, p. 110) with a significantly higher margin of error when measuring, or identifying, “other bodies.” Biometrics systematically discriminates in terms of race, ethnicity, gender, class, disability, and age (Magnet, 2011). At a more symbolic level, the association between biometrics, which have been traditionally used to control “deviant” populations, and criminality contributes to the conflation between refugees with notions of illegality (Ajana, 2013a, p. 584). Power asymmetries are salient in the process of biometric registrations: refugee bodies are always being measured while humanitarian officers always ask the questions. Demanding that refugees reveal their true identities through their biometric data attests to the enduring coloniality of power (Quijano, 2000). Transparency, a eurocentric and thus colonial concept, is always about control (Han, 2015).

In the Rohingya case, the bias and power asymmetry inherent in all refugee biometric registrations was compounded by additional practices, which further materialized discrimination and risks for this specific population. The registration system did not offer the option “Rohingya” as a possible ethnic identity. This is striking given this is a system to register the Rohingya and constitutes clear evidence that biometric datasets are not objective but based on political decisions while claiming to be scientifically robust. The option offered to refugees, “Myanmar nationals,” is a term that Myanmar does not recognize. This symbolic erasure of the Rohingya mirrors the much criticized, discriminatory 2014 census by Myanmar authorities, which did not offer people the option Rohingya, but instead labeled them “Bengali” nationals (Rahman, 2017).

The power asymmetries involved in biometric registrations are further exacerbated by the fundamental lack of meaningful consent during refugee registrations when refusing to register amounts to refusal to receive assistance—something refugees can hardly afford.¹⁴ The well-documented lack of safeguards in countries without established legal frameworks regarding privacy and data protection raise concerns about the consequences if sensitive personal data are leaked, hacked, or even shared—as happened during Ebola when the emergency of the epidemic overrode the established norms for data safeguards. A data breach can be

devastating for a vulnerable population. For the Rohingya, it could potentially deny them job opportunities, or health care. The fact that the registration is outsourced to a private firm does not offer firm safeguards regarding data protection.

Further risks stem from potential “function creep” – the widening use of biometrics beyond the original purpose of registration – associated with the logic of securitization. There are concerns that the population registry may be shared with Myanmar and can be used to facilitate the repatriation of the Rohingya (Rahman, 2017) as confirmed by the Bangladeshi Industry Minister: “The reason behind the biometric process is to keep record of the Rohingya. We want them to go back to their own place.”¹⁵ Biometric data are the ultimate instruments of control—straight out of the colonial toolbox. Just like the 19th-century penal colonies whose inhabitants were simultaneously abandoned and closely monitored (Stoler, 2016), refugees are similarly left isolated in what are widely accepted poor conditions and at the same time subject to constant counting and surveillance. To paraphrase Tom Streeter (2011), in the digital, colonialism finds the perfect tool.

Function creep can also result from the logic of capitalism. Examples from the implementation of digital identity projects in the global south feed anxieties about the extraction of biometric data for profit as “vulnerable bodies are spun into gold” (Magnet, 2011, p. 153). For example, the Chinese AI company Cloudwalk, which has been commissioned to conduct biometric registrations of all Zimbabwean citizens as part of the national digital identity program, openly admits extracting and reusing the data to improve its facial recognition algorithms which are sold worldwide.¹⁶ Even though the Cloudwalk example does not involve humanitarian organizations, it is a stark reminder of the lack of safeguards in contexts without legal frameworks around data protection.

Refugees are not passive victims of such policies. In November 2018, groups of Rohingya based in Cox Bazaar went on strike protesting about the biometric identity cards, which they feared could pave their involuntary return to Myanmar risking further ethnic violence.¹⁷ The strikers expressed concerns about the potential data sharing with Myanmar, the fact that identity cards erased their ethnicity and that they had not been consulted about the scheme. The strike culminated a period of intermittent protests throughout 2018, but was met with violence by the Bangladeshi authorities which were facilitating the registration process.¹⁸ Refugee registrations and the identity program continued as normal. According to one of my interviewees who worked in the Rohingya response, efforts to communicate with affected communities “came after key decisions had been taken.” As in earlier humanitarian responses, feedback mechanisms focus on the evaluation of specific interventions rather than the issues that matter to affected people themselves (Madianou et al., 2016). The power asymmetries of humanitarianism,

starkly evident in refugee camps, are too steep to overcome despite acts of resistance and contestation.

Just like crisis data (Crawford & Finn, 2015), biometric data are ontologically and epistemologically limited. Because of their limitations, biometric data can have disastrous consequences for humanitarian subjects. Yet, biometric data are extremely successful for controlling and monitoring people. So biometrics can have devastating consequences both when they fail and when they succeed. By reproducing the asymmetries of humanitarianism, data become constitutive of the crisis. The flawed data practices of the biometric registrations may determine outcomes for Rohingya people whether they remain in Bangladesh or if they are repatriated to Myanmar. In the Rohingya case, data practices have indelibly inscribed, and therefore materialized, relationships of inequality.

Conclusion

I have proposed the notion of technocolonialism to capture the convergence between digital developments with humanitarian structures and market forces and the extent to which they reinvigorate and rework colonial relationships of dependency. Technocolonialism shifts the attention to the constitutive role that data and digital innovation practices play in entrenching inequalities between refugees and humanitarian agencies and, ultimately, inequalities in the global context. To understand the consequences of data and innovation for humanitarian practice, I situate my analysis within a rapidly transforming field characterized by five competing logics: the logic of humanitarian accountability, the logic of audit, the logic of capitalism, the logic of solutionism, and the logic of securitization. The distinction between the different logics is largely analytical. In practice, the five logics intersect, and in so doing, they reactivate and rework the “colonial debris” (Stoler, 2008). Digital innovation and data practices materialize the often intangible “imperial formations” (Stoler, 2016) and give them new life and vigor. My analysis also revealed that technocolonialism is extractive: refugees produce value through their data and participation in humanitarian experiments, which is then used for the benefit of stakeholders, including private companies. The article explored two examples where innovation and data practices rework and revitalize the relationships of inequality and exploitation between refugees and humanitarian agencies.

In the first example, we observed that, in the case of feedback apps, digital innovation and data practices amplify the logic of humanitarian audit and marketization. Although feedback apps appear to be addressing the demands for humanitarian reform and greater accountability, in practice, they serve the logic of audit by streamlining the process of reporting to donors through the provision of easily retrievable and reproducible metrics about the evidence of impact which is a vital component for all funding applications, including the renewal of funding. Following the data trails in

the humanitarian field reveals that datafication is constitutive in shifting accountability from affected people to donors. The logics of capitalism and solutionism further compound these asymmetries through the normalization of the Silicon Valley mantras of disruption and “failing fast” in what are fragile political and social environments. The analysis revealed how refugees, through their data practices and participation in humanitarian experiments, produce value which is extracted for the benefit of other stakeholders. Feedback datasets are used to justify the funding of aid projects; refugee camps are used as testing grounds for innovation and the scaling up of business models. Private companies extend their reach while appearing to provide market solutions for political problems.

The second example focused on the risks associated with the biometric registration of Rohingya refugees. Here, we observed that the different logics intersect resulting in a potentially dangerous situation for the refugees. The already significant and well-documented risks and biases of biometric data (racial and gender bias, codification of discrimination, lack of data safeguards, function creep, and ethical concerns given the lack of meaningful consent) were compounded by practices specific to this registration: the symbolic erasure of the Rohingya as an ethnic group from the official database. These concerns confirm that biometrics can become instruments of control and surveillance, ready to facilitate a possible repatriation of the Rohingya to Myanmar despite the risk of renewed ethnic violence. Despite moments of hope, evident in the Rohingya strike which exemplified refugee agency, the structural power asymmetries are too steep to overcome. Digital technology and data ossify discrimination by turning soft data into a permanent, “scientific” record that is hard to contest. By reproducing the asymmetries of humanitarianism, data become constitutive of the Rohingya crisis. In this example, datafication and biometric experimentation reproduce the coloniality of power, while occluding discrimination under the discourse of science.

While technology and data practices rework and revitalize imperial debris (Stoler, 2008), my argument is not solely a technological one. Neither technology nor neoliberalism can explain the geopolitical significance of humanitarian interventions. The fact that technocolonial interventions take place in refugee camps or among displaced people can be explained if we understand the tenacity of imperial formations and the often occluded legacies of colonial domination. At the same time, technology and data practices play an equally significant role in sustaining the inequalities of the humanitarian system. This occurs in the following ways: by extracting value from refugee data for the benefit of stakeholders; by extracting value from experimentation through innovation projects for the benefit of stakeholders, including private companies; by materializing the intangible forms and “ruins” of colonial legacies such as discrimination; by contributing to the production of social orders that entrench the

“coloniality of power” (Quijano, 2000); and by occluding some of these practices under the context of “emergency,” or science. The term technocolonialism is necessary because it pays equal attention to colonial legacies, datafication, and innovation as well as global capitalism and inequality. North-South inequalities are at the heart of the notion of technocolonialism. While some of the arguments developed here may have wider applicability, ultimately, technocolonialism highlights that refugees and other humanitarian subjects are disproportionately affected by the convergence of digital developments, capitalism, and colonial legacies. Not only does technocolonialism acknowledge the persistence of “imperial formations,” but it shifts the emphasis on the active work of the digital in turning colonial inequalities into tangible forms. The “data” claim to science and objectivity occludes some of these practices while further compounding the durability of colonial legacies, turning inequalities into hard facts which are increasingly difficult to challenge. By reproducing the power asymmetries of humanitarianism, data and innovation practices become constitutive of humanitarian crises themselves.

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Notes

1. “New UN Deal With Data Mining Firm Palantir Raises Protection Concerns,” <https://www.irinnews.org/news/2019/02/05/un-palantir-deal-data-mining-protection-concerns-wfp>
2. The response from World Food Programme (WFP) did not address these issues, and while assurances were made “that no access that provide beneficiary participation would be granted,” there was no mention of the sharing of metadata, or the associated software models that will be employed and produced out of this partnership (<https://responsibledata.io/2019/02/08/open-letter-to-wfp-re-palantir-agreement/>)
3. A hackathon is a collaborative event drawing on the collective problem-solving skills of its participants, typically engineers and computer scientists.
4. https://www.iom.int/sites/default/files/situation_reports/file/bangladesh_sr_20180525-31.pdf
5. This is a much larger discussion which extends the scope of this article, but see Mezzadra and Neilson (2019) for

comprehensive discussion as well as the parallel concept of racial capitalism (Robinson, 1983).

6. The connection between humanitarianism and colonialism is typically revealed in eruptions of scandal such as the 2018 Oxfam sexual harassment and abuse scandal: <https://www.ft.com/content/8799725c-123c-11e8-8cb6-b9ccc4c4dbbb> and <https://www.theguardian.com/commentisfree/2018/feb/20/oxfam-abuse-scandal-haiti-colonialism>
7. The paradigms of Cultural and Media Imperialism (Schiller, 1971) assume a clear imperial center (the United States) which is at odds with the more decentralized approach on imperial formations put forward here.
8. For a discussion of Facebook’s Free Basics program see <https://www.theguardian.com/technology/2016/may/12/facebook-free-basics-india-zuckerberg>
9. <https://www.ft.com/content/e2d6588a-5042-11e8-b3ee-41e0209208ec>
10. The criteria for VHacks can be found here: <https://medium.com/inside-the-salesforce-ecosystem/the-platform-chronicles-10-questions-with-vala-afshar-salesforces-chief-digital-evangelist-on-fc68cb96fc9b>
11. The criteria for the Techfugee hackathons can be found here: <https://www.youtube.com/watch?v=nHnE8DzvbyE>
12. A video recording of Goube’s keynote can be found here: <https://www.youtube.com/watch?v=6WRV5HtnMco>
13. <https://www.youtube.com/watch?v=O1NAIWLCzyk>
14. This was evidenced in the 2019 WFP response in Yemen when the agency threatened to stop food distributions unless the Houthi leaders agreed to biometric enrolments: <https://www.thenewhumanitarian.org/news/2019/06/17/un-yemen-rebels-aid-theft-biometrics>
15. <http://www.abc.net.au/news/2017-09-26/rights-of-rohingya-in-question-bangladesh-myanmar/8987158>
16. <https://qz.com/africa/1287675/china-is-exporting-facial-recognition-to-africa-ensuring-ai-dominance-through-diversity/>
17. <https://www.thenewhumanitarian.org/news-feature/2018/11/27/bangladesh-rohingya-strike-highlights-growing-refugee-activism>
18. <https://www.aljazeera.com/news/2018/11/violence-stalks-identity-card-scheme-rohingya-camps-181122075307535.html>

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