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Epistemic Transformation at the Margins: Resistance to Digitalisation and Datafication within Global Human Rights Advocacy

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ABSTRACT

A post-human “transformation thesis” has emerged which posits that global politics is being radically altered by digital technologies and datafication. There is a polemical tendency to generalise about macro-level revolutions in both the techniques of governance and knowledge production across different political spheres, ranging from international security to development, humanitarianism and human rights. By instead applying a meso-level lens on global politics, this article cautions against excessive generalisations about epistemic transformations. It does so by emphasising the ways in which technological changes are mediated through field-specific struggles. This point is illustrated by demonstrating the absence of a radical data revolution within the field of global human rights advocacy. Through a sociological analysis of leading human rights NGOs and their epistemic cultures, it shows how that the field’s humanistic sub-culture limits the adoption of novel digital- and data-centric practices.

KEYWORDS

Datafication; human rights; technology; knowledge production; advocacy

Introduction

The discipline of International Relations and the sub-field of global governance studies are currently experiencing a “computational turn”. This involves an interest in how digital technologies are transforming global politics. The expansion of digital technologies is observed to bring about epistemic changes in terms of how the world is known and represented, as well as bringing about new forms of governance. Digitalisation refers to “the way many domains of social life are restructured around digital communication and media infrastructures” (Brennan and Daniel Kreiss 2016, 556). Digital technologies generate a deluge of digital traces that can be transformed into quantitative data. This has led to the emergence of new techniques for gathering, processing and interpreting data. Digitalisation is therefore twinned with the growing datafication of social life. Here, datafication “refers to taking information about all things under the sun—including ones we never used to think of as information at all, such as a

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person's location, the vibrations of an engine, or the stress on a bridge—and transforming it into a data format to make it quantified” (Cukier and Mayer-Schönberger 2013, 15).

Within debates concerning the global effects of digitalisation and datafication, there is a polemical tendency to generalise about the radical transformation of social and political fields that are impacted by emerging digital infrastructures, with some equating these changes to a revolution in the (post-)human condition (Duffield 2018; Braidotti 2013). These polemical assertions make sense when applied to certain spheres of human activity, such as those that have been at the forefront of technological revolutions, including economic or security fields. However, not all global spaces have properties or epistemic cultures that are so amenable to radical epistemic transformation. These totalising trends can be challenged by highlighting how the impact of digital technologies and data-centric methods are spread unevenly across different political and social fields. This article looks at the example of transnational human rights advocacy to illustrate how digital transformation is negotiated through field-specific struggles. I show how despite the expansion of data infrastructures and human rights advocates' adaptation to life within cyberspace, their traditional epistemic practices remain entrenched. The final section of the article then makes a broader pitch relating to the need to focus on how technology and datafication are mediated through the organising principles of bounded political fields. In doing so, I shift the conceptual lens from macro-level generalisations about the transformative impact of digital technologies to mediation at the meso-level of specific social microcosms within world politics.

Digitalisation, datafication and epistemic transformation

In recent years, the interlinked processes of digitalisation and datafication have garnered growing attention within various sub-disciplines of international relations. Areas of research that have paid particular attention to digital transformation include studies focusing on the rise of Big Tech and surveillance capitalism, post-human security studies, disaster management, post-humanitarianism and digital activism (Madsen et al. 2016; Zuboff 2019; Cudworth and Hobden 2017; Schwartz 2017; Chandler 2019; Duffield 2018; Gutiérrez 2018). There is a polemical tone to much of this emerging literature, as reflected in the claim that society is undergoing a paradigmatic shift from modernism to a “coming age of post-humanism” (Chandler 2015a), or with Duffield's (2018, 58) declaration that we are experiencing the “consolidation of the cybernetic episteme and the coming post-social world”. I dub this perspective the “transformation thesis”—the view that digital connectivity and datafication are bringing about a revolution in the human condition at the global level. There are three main dimensions to these analyses. Firstly, there is interest in how the growing entwinement of digital technologies with political life changes how politics is enacted (transformations in governance). Secondly, there is an emphasis on developments in how humans come to know the world around them (epistemic transformation). Thirdly, stronger philosophically minded accounts argue that the increasing ubiquity of technological agencies demands that scholars reconceptualise human nature and Being (ontological transformation).

Datafication and digitalisation make the world a more complex and contingent place, and the acceptance of this contingency among political actors has direct consequences for the styles and techniques of governance. According to David Chandler (2019), this

complexification leads digital governance to eschew political action that purports to act on the root causes of problems pre-defined by causal analysis or deductive generalisations. This eschewal of causes is accompanied by a temporal shift towards the “governance of effects”, whereby “correlative machines” and algorithmic feedback loops are employed to alert governing actors to emergent and unforeseen effects in the present, rather than looking back historically at causal chains (Chandler 2019). Instead of instituting policy interventions that aim to solve the root causes of a targeted political problem, digital governance emphasises resilience thinking and the containment of emergent effects through the management of potential risks; hence why it has been readily applied to explain security in the digital age, and deployed practically within the fields of crisis or disaster mitigation (Chandler 2015b; Hilbert 2013). Meanwhile, the expansion of big data and algorithmic techniques also allows techno-optimists to assert the benefits of “calculative rationality” and “effective altruism” (Madsen et al. 2016, 282; Singer 2015). Here, advocates of efficient governance or philanthropy increasingly defer to quantification and machine learning. Such algorithmic transformations have also attracted the attention of more critical scholarship. Emphasising the growing ubiquity of the “cult of data-ism”, David Berry (2019, 47) has argued that “the drive to use rationalisation and the insertion of algorithmic ways of doing and thinking permeates our everyday lives in contemporary computational societies”.

The twinned processes of digitalisation and datafication also entail the enrolment of new actants into political fields. At the human level, data analysts, computer scientists and data journalists compete with traditional knowledge producers for epistemic authority (Ruppert, Isin, and Bigo 2017, 5). According to advocates of the transformation thesis, this invasion by data expertise triggers a break-down or blurring of traditional disciplinary distinctions (Chandler 2019, 36–37; Berry 2011, 12). At the same time, datafication leads to denser networks of technological mediators who are mobilised into the knowledge productive process, à la actor-network theory (Latour 1993, 108). This enrolment of emergent non-human agencies only reinforces the trend towards conceptualising the world as complex, contingent, and ungovernable through traditional rationalities. Furthermore, the emphasis on redistributed agency and the decentring of the human is also linked to a more fundamental ontological claim; the idea expressed by Duffield (2018, ix) that the “computational turn has fundamentally changed our understanding of the world and what it means to be human”. This is expressed in post-humanist thought as a break with the modernist-humanist paradigm’s dualistic separation of humanity from nature (Braidotti 2013).

Thus, at one end of the spectrum, we have an empirical claim that politics and society are being radically transformed by digitalisation, computation and datafication. On the other end, these ruptures are seen to demand a radical onto-epistemic retooling. The latter claim cannot be contested on purely empirical grounds, as it belongs primarily to the realm of speculative philosophy (Kaltofen 2018, 46). It is not the aim of this article to engage in such a philosophical dialogue. Instead, I will scrutinise the former empirical claim by questioning whether such technological processes are stimulating *revolutionary* (rather than *evolutionary*) changes at the meso level of global politics. I home in on the meso (i.e. bounded social fields) rather than the macro (i.e. world systems) due to a desire to highlight the uneven effect that digital technology has on transforming different political fields, and to push back against some of the broad-

brush and polemical generalisations made about the extensiveness of socio-political transformation.

To demonstrate the need to consider how digital transformation is mediated through the social logics that are specific to individual political fields, the next section will explore technological change affecting transnational human rights advocacy. I start by considering how human rights NGOs have adapted to the expansion of digital and data infrastructures. This includes discussing the emergence of new epistemic and media practices within the human rights field. Following this, I argue that despite advocates' adaptation to the digital universe, the field has not undergone a wholesale transformation. I then explain this limited transformation through studying the epistemic cultures of leading human rights NGOs. I draw on an original dataset which maps out of the professional and career backgrounds of individuals working for Amnesty International and Human Rights Watch. These two human rights NGOs are singled out due their unparalleled size and oligarchic dominance within the human rights field. These cases highlight how, even in the face of digitalisation and datafication, the human rights field retains a largely qualitative epistemic culture and perpetuates a logic of practice that is resistant to the kind of methodological revolutions seen in other global political fields.

Epistemic developments within human rights advocacy

As with other transnational political fields, global human rights advocacy has had to adapt to new technologies, the rise of digital media and new data-centric practices that can be mobilised by both human rights proponents and violators alike. Supporters of the notion that human rights practice is undergoing a transformative epistemic shift have pointed to the uptake of data-driven methods which “enables different ways of knowing, of gathering and processing information, and of analyzing findings” (Emerson, Satterthwaite, and Pandey 2018, 186). Leading human rights NGOs have expressed an explicit interest in expanding their production and use of data, as reflected in the rapid growth of graphical representations of quantitative data in reports by Amnesty International and Human Rights Watch (Rall et al. 2016). This datafication can be linked to the broader societal and governance trends discussed in the previous section. Extended data infrastructures have generated new tools for digital- and data-centric activism which may have the potential to empower civil society organisations (Gutiérrez 2018). High capacity institutional donors like the Ford Foundation and Open Society Foundation have been key mediators in this process, through their initiatives to improve the technological sophistication of human rights practice (Piracés 2018, 29). On the supply side, the increased availability of data collected and shared by governments and international organisations provides professional advocates with an expanded range of human rights indicators to work with.

The extended use of digital technologies and new types and means of data production offers both substantive and symbolic benefits to human rights practitioners. Practically, digital technologies increase the absolute volume of data available on various types of human rights violation. For instance, the spread of smartphones and the widespread use of social media and messaging applications enhances the quantity of information sourced from civilian witnesses (McPherson 2018). Ironically, despite concerns among human rights activists with potentially oppressive methods of state surveillance that

digital infrastructures enable, these same infrastructures allow human rights activists to become quasi-surveillant actors in their own right (Lyon 2019, 69). Other emergent technologies like geospatial imaging provide new opportunities for the evidential verification of human rights abuses, as well as novel research in places that are physically remote or inaccessible (Livingston 2016). Data can also play a symbolic role within human rights reporting. It may have the potential to enhance the symbolic sense of “objectivity” of human rights research in the eyes of advocacy audiences. As Emerson, Satterthwaite, and Pandey (2018, 162) argue, data that is graphically represented within human rights advocacy materials “can lend urgency to messages and make stories more memorable”. Visualisations like satellite imagery have the potential to “transform a reader into a witness” (Rall et al. 2016, 187). They act to shrink the world and bring the audience closer to the violation in question. This is similar to the symbolic “victimology” of traditional human rights reporting, whereby witness testimonies and narratives of suffering are used to affectively engage audiences and foster empathetic bonds with victims (Markland 2020, 177).

Digitalisation has also spurred the enrollment of new organisational, human and technological agents into the production of human rights knowledge. New human rights organisations, campaigns and networks have emerged which specialise in data-centric or tech-driven research. Examples include the Satellite Sentinel Project (2015), the Human Rights Data Analysis Group (2020), the Human Rights Methodology Lab (2020) and Forensic Architecture (2020). Datafication has also catalysed growing human rights activism relating to mass surveillance, privacy and big data, with organisations like Privacy International, Big Brother Watch and Liberty lobbying heavily on these issues (Dencik, Hintz, and Cable 2019, 172). There have also been an increasing number of collaborations between established human rights NGOs and third-party data consultants—creating new opportunities for networked activism (Rall et al. 2016, 189; Gutiérrez 2018, 68–69). According to McPherson, Thornton, and Mahmoudi (2020), these changes may be bringing about a “knowledge controversy” within the field, with technologists and data experts challenging the traditional authority and epistemologies of human rights professionals. According to Jay Aronson (2015), the entry of new actors may even be threatening the professional coherence and communal solidarity of the human rights field.

The question as to whether the human rights field is experiencing a “knowledge controversy” remains open to debate. While many of the developments highlighted above have had methodological and practical impacts on the conduct of human rights research and advocacy, it may be hyperbolic to suggest that this amounts to an existential threat to the field’s coherence. The next section will critically assess these claims by looking at the extent to which Amnesty International and Human Rights Watch have undergone radical epistemic transformations. It will be argued that there is little evidence to support the idea that human rights advocacy is being subsumed by data-driven activism, or to suggest that human rights fact-finding is undergoing a wholesale data revolution. The actual deployment of data-centric methods by leading human rights NGOs has been modest at best. The arguments presented below resonate with Dencik, Hintz, and Cable’s (2019, 177) findings that social justice organisations have been slow to fully comprehend or operationalise new technological infrastructures and data techniques. As well as establishing the extent to which the two largest and most prominent human rights

NGOs have been transformed, I also analyse the logic of practice that undergirds their activities and legitimacy in order to explain why the field of human rights has so far been relatively resistant to a radical overhaul.

Transformations and continuities within human rights advocacy

The extent to which human rights has been transformed by the intrusion of digital technologies and data-centric methodologies into the field can be gauged by studying the epistemic practices of human rights research and advocacy, as well as through examining the expertise of human rights practitioners. Following this line of inquiry, I find little evidence to support the allegedly transformative influence of data-driven methods on human rights practice. This section begins by looking empirically at the extent to which Amnesty International and Human Rights Watch have transformed their epistemic practices and expertise vis-à-vis digitalisation and datafication. The second part of this section then seeks to explain why human rights advocates have yet to fully integrate quantitative approaches and computational tools into their core mode of practice, and why data expertise still exists on the margins of the field.

The limited transformation of human rights advocacy

To gauge the extent to which Amnesty International and Human Rights Watch have been transformed by digitalisation and datafication, one needs to analyse the epistemic culture of these two leading human rights NGOs. As the two most prominent human rights advocacy organisations, they serve as an empirical proxy for the wider field. Their epistemic cultures are studied by (1) observing their reporting and advocacy practices and (2) looking at the kinds of expertise that they draw upon. For the latter, the research presented here draws on original datasets compiled for this study which reviews the career and educational backgrounds of full-time professionals working for these NGOs. These datasets were compiled using data from the Human Rights Watch (2020) website and LinkedIn (2020a, 2020b).

Regarding the ethics of this research, it is necessary to reflect on the fact that the misuse of social media traces by social media companies and third-party consultancies like Cambridge Analytica has been one of the central controversies that has spurred political and scholarly debates around datafication (Markham, Tiidenberg, and Herman 2018). As suggested above, issues of data ethics and privacy have also seeped into the human rights advocacy field. Thus, to ensure the ethicality of this research, only publicly available, non-personal and anonymised data was used to build the NGO datasets.¹ In compiling these datasets, the aim was to provide a comprehensive picture of the professional backgrounds of the human rights elite. However, data sourced from the Human Rights Watch website and LinkedIn are not perfect representations of reality. Indeed, there are methodological limits to relying on such public profiles. These profiles are not objective reflections of these NGOs' expertise. Social media profiles are

¹Unlike other social media websites like Facebook which are designed more for personal connections, most LinkedIn users agree to publicly share professional and educational information as per the company's privacy policy (LinkedIn 2020c). No personal information is recorded on the datasets.

subjective and strategic representations of the Self that are tailored towards the production of professional or epistemic capital. Reliance on LinkedIn's search engine algorithm also complicates sampling. The search algorithm prioritises users who have closer connections to the searcher. Distant connections, or individuals who have opted not to share professional information, may therefore weaken the methodological precision of the datasets. Nevertheless, as a professional field of practice, LinkedIn is a popular tool for human rights practitioners. The compiled datasets include career and employment data from 241 anonymised employees at Amnesty International and 159 anonymised individuals at Human Rights Watch. They give a snapshot of the types of professional and disciplinary expertise that these organisations draw upon. This is particularly salient when it comes to questions of technological change and epistemic transformation, as if the field has undergone significant retooling then this should be reflected in the backgrounds of its members.

There is clear evidence that both Amnesty International and Human Rights Watch have expanded their work on technology and data in recent years. In 2018, Amnesty International's "Technology and Human Rights Team" morphed into its "Amnesty Tech" programme, described as a "global collective of advocates, hackers, researchers and technologists" aiming to scrutinise state and corporate surveillance, "ensure accountability in the design and use of new and frontier technologies", and "encourage innovative uses of technology to help support our fundamental rights" (Amnesty International 2020b). Amnesty International has been particularly keen to utilise cyberspace as a realm for human rights research, particularly through its open source investigations. This includes Amnesty's Digital Verification Corps, where it partners with graduate student volunteers within leading law schools to provide open source fact-checking and verification of human rights violations, as well as its Decoders project, where volunteers can sign up to sift through tweets or other online sources, code for relevant information and thus contribute to the production of quantitative datasets relating to a variety of human rights issues (Dubberley 2019; Amnesty International 2020a). Similarly, in 2016 Human Rights Watch helped to cofound the Human Rights Methodology Lab with the support of the Open Society Foundation (Human Rights Methodology Lab 2020). The Methodology Lab's main aim has been to "develop innovative projects with data" and initiate inter-disciplinary investigations which draw upon the fields of economics, statistics, environmental science and other fields that lie outside the traditional boundaries of human rights expertise (Human Rights Watch 2016).

Datafication and digitalisation have also had a constitutive impact on salient political issues at both the national and global levels, and human rights advocates have been responsive to associated trends in public discourse. Responding to societal datafication, both Human Rights Watch and Amnesty International have worked on data-centric issues such as mass surveillance and the human rights of machine learning (Human Rights Watch 2019a; Amnesty International 2018). Issues of surveillance are particularly relevant to human rights NGOs as they are themselves often victims of state surveillance, both in Western and non-Western contexts (Dencik, Hintz, and Cable 2019, 170). As well as investing resources into research and advocacy on these emergent issues, both organisations studied here have been involved in legal action relating to mass surveillance. As Dencik, Hintz, and Cable (2019, 172) note:

Litigation has emerged as a key strategy of policy advocacy. Campaign organisations such as Privacy International, Liberty and Amnesty International challenged GCHQ's data collection practices at the Investigatory Powers Tribunal (IPT) which decided that some of the agency's activities were unlawful. Others, such as the Open Rights Group, Big Brother Watch and Human Rights Watch brought cases against the British government before the European Court of Human Rights and the European Court of Justice.

Beyond research, advocacy, and litigation, it is also important to consider the extent to which these organisations have become anchored and embedded within digital infrastructures. As Johansson and Scaramuzzino (2019, 6) have argued, visibility within cyber-space—or what the authors call a “logic of presence”—is increasingly central to the way that advocacy organisations like Amnesty International and Human Rights Watch function. This is particularly important for Amnesty International due to its status as a membership organisation: it needs to engage online publics through social media platforms so that it can recruit new members and ensure its long-term financial viability. This trend towards claiming digital presence can also be seen in Amnesty's recent hiring practices: many of those with data or digital-relevant experience are not statisticians, data scientists or data journalists, but individuals who have migrated to the human rights field after spending time working in private sector-based digital marketing roles (LinkedIn 2020a). These changes are structured by the wider political economy that these organisations are embedded within. Their economic and symbolic sustenance is dependent on their ability to claim prominence within cyberspace. Here, they are deferential to the “surveillance capitalist” algorithms of the Big Tech companies, like Google, Facebook, and Twitter, who govern the lion's share of this digital space (Zuboff 2019).

While it is undeniable that human rights advocacy has had to adjust to the digital era, such a process of adaptation is nothing new. As Markland (2020) has shown, the history of leading humanist advocacy organisations has been one of constant adaptation and reinvention; histories punctuated by technological and normative developments. When one looks more specifically as to whether there has been an epistemic or methodological shift within the cultures of these organisations, the lines of continuity are clear. First, while there has been a shift towards digital technology and data-related issues as subjects of reportage, the work carried out by Amnesty International and Human Rights Watch on these themes is still relatively shallow. According to its webpages, the earliest report published by Amnesty International labelled under “Technology & Human Rights” was October 2017 (Amnesty International 2019). As of September 2019, the organisation had published 7 more reports under this label. However, during the same period it published a total of 275 reports on all topics, meaning “Technology & Human Rights” issues accounted for only 2.9 percent of publications in this time frame. Similarly, while Human Rights Watch has been active in researching mass surveillance in China's Xinjiang province, it appears to have shown limited interest in reporting on issues of surveillance, data privacy or algorithmic governance more broadly (Human Rights Watch 2019a, 2019b, 2018). Between August 2001 and September 2019, only 17 percent of Human Rights Watch reports on freedom of speech issues related to internet freedoms (Human Rights Watch 2019b). The relative absence of engagement on the thematic terrain of data or digital technologies appears to contradict the allegedly transformative ruptures posited in the previous section.

The limits to these organisations' epistemic transformation is also evident when surveying the professional and educational profiles of their employees. Out of 151 staff members at Human Rights Watch for whom there was available data on career backgrounds, only 5 were coded as “technologists” or “data professionals” (3.3 per cent of the total).² This compares to 29.0 per cent who had previously worked for law firms, 24.5 per cent who had worked for media organisations, 27.8 per cent who had worked for international organisations like the United Nations, 24.5 per cent who had worked for academic institutions, and 55.0 per cent who had previously been employed at another NGO. As a more expansive organisation, the Amnesty International dataset was somewhat larger than Human Rights Watch's. Out of a sample of 217 staff members for whom there was available data on career trajectories, only 8 (3.7 per cent) had previously worked as technologists or in data-centric roles. This is compared to 23.5 per cent who had worked for international organisations, 15.7 per cent who had worked for law firms, 18.0 per cent who had been employed in the media, 18.0 per cent who had worked in government, and 72.8 per cent who had worked for other NGOs.

Datafication requires increasingly quantitative and statistical skillsets. In educational terms, these skills are best represented in economics and STEM (science, technology, engineering, and mathematics) subjects. Out of a sample of 145 Human Rights Watch staffers, 18 (12.4 per cent) had studied a STEM subject at bachelor's level or higher, while 13 (9.0 per cent) had studied economics. This is compared to the 51.7 per cent who had studied law, 37.9 per cent who had studied politics or international relations, 19.3 per cent who had studied another social science, and 15.9 per cent who had studied languages. Out of a sample of 229 individuals at Amnesty International for which educational data was available, 16 (7.0 per cent) had studied STEM subjects, while 15 (6.5 per cent) had studied economics. This compares with 32.7 per cent who had studied law, 48.0 per cent who had studied politics or international relations, 26.6 per cent who had studied other social sciences, 19.2 per cent who had studied language, and 14.9 per cent who had studied history. While some of those with STEM backgrounds had studied computer science or information systems, the most common subjects among this group were psychology and environmental studies—subjects at the “softer” and less mathematically sophisticated end of the sciences. This was the case for both organisations.

Explaining the absence of epistemic revolution in the human rights field

The integration of more data-centric practices into human rights research and advocacy is hindered by weak data infrastructures in many of the countries or regions that practitioners report on. As Gutiérrez (2018, 10) argues, “many individuals on this planet do not have access to a phone, the internet or a bank account, do not live in a city and do not share, buy or chat online. They are invisible to the data infrastructure”. While certain types of indicators are more readily available, particularly in relation to economic and social rights, data compiled on core political and civil rights issues like

²Defined by evidence of previous employment as technologists or in data-centric roles, such as data analysts, data scientists, data journalists or working for software companies.

extrajudicial killings, torture and enforced disappearances are far less forthcoming (Rall et al. 2016, 187). Such information tends to be strictly guarded by violating governments, who have little incentive to make reliable or accurate data available to hostile human rights advocates. This problem is particularly acute for advocates operating in polarised or conflict-stricken contexts, as illustrated by the difficulty of estimating the number of civilian deaths in the aftermath of the Sri Lankan civil war. Two years after the end of the conflict, a United Nations-led Panel of Experts provided an estimate of 40,000 deaths, but acknowledged that “... there is still no reliable figure for civilian deaths”, and that “[o]nly a proper investigation can lead to the identification of all the victims and to the formulation of an accurate figure for the total number of civilian deaths” (United Nations 2011, 41). Thanks to the hostile political climate in the country, such a systematic investigation has never been possible.

But can the absence of data infrastructures fully explain the relative lack of a technological or epistemic revolution within the human rights field? As established in the previous section, the growing glut of digital traces produced through networked interactions means there may be further potential to expand the use of quantitative methodologies and computational techniques. Furthermore, as Keith Krause (2018, 140) has observed in the case of knowledge production around conflict deaths, a drive towards quantification can exist even in the absence of reliable data. Thus, reliable data infrastructures are not a necessary condition for the flourishing of data cultures. Instead, as Bigo and Bonelli (2019, 108) argue, “[t]he way that actors use new technologies depends on their past dispositions as well as on their capacity or willingness to transform paper data into computer data”. Furthermore, [d]ata are integrated into social worlds and into everyday practices only if they are seen by actors as helping them in their power struggles (ibid.). In order to understand the relative absence of an epistemic rupture within Amnesty International and Human Rights Watch, it becomes necessary to look both at their prevailing epistemic cultures, the dominant habitus of the professionals that constitute these organisations, as well as the logic of practice that guides the broader field of human rights advocacy.

The human rights field is “interstitial” (hybrid) to the extent that it is heavily influenced by the adjacent fields of law, journalism, academia and politics (Vauchez 2011). As seen above, this interstitial reality manifests in the quantity of employees at Amnesty International and Human Rights Watch with legal and journalistic career backgrounds, as well as legal and political education. Historically, the human rights field grew in close proximity to the Anglo-American legal academy at a time when human rights were being politically legitimated as a foreign policy tool of the US government (Dezalay and Garth 2006). Deep connections between human rights activists and lawyers have allowed the former to shore up their epistemic authority by cloaking their advocacy in a technocratic and objective language, although not necessarily a quantitative one (Dezalay and Garth 2006, 252). The strong concentration of legal expertise within the world’s two leading human rights NGOs reflects an approach to research and advocacy which emphasises the gathering and dissemination of witness testimonies, legal verification, and the institution of international law. This is a different skillset to digital or data expertise. Similarly, the proportion of employees with degrees in politics, international relations and other social science disciplines (excluding economics) may also provide an indication as to the kind of epistemic culture engendered within these

two organisations. While there is a quantitative sub-culture and statistical tendency within the social sciences, advanced statistical methodologies and algorithmic techniques remain at the margins of popular disciplines like international relations. As Goetze (2017, 108) argues, these social science disciplines are primarily valued for the “soft skills of researching, synthesizing, writing and communicating knowledge, and gathering information”.

About a quarter of Human Rights Watch staff and just less than a fifth of Amnesty International employees have previously worked for media organisations. On the whole, these are individuals coming from mainstream liberal media outlets and news agencies like the *BBC*, *Reuters*, the *Associated Press*, *The New York Times*, *CNN*, *TIME*, *Al Jazeera* and *The Guardian*. They are not specialist data journalists. Instead, they are individuals who complement the demand for advocates to translate complex political situations or highly technical legal language into reports that can be consumed by non-specialist audiences—something necessitated by the limited absorption capacity of target audiences and the need to adapt human rights messaging to rapid fluctuations in the media cycle. The ability to mobilise the attention of the news media goes to the core of Human Rights Watch’s “shaming methodology”, which aims to expose violating parties to public opprobrium (Roth 2004, 63). With the backdrop of a saturated media environment, the emergence of digital and social media only further heightens the need for expertise in media and communications. These journalistic techniques are still expressed in a primarily qualitative format, often revolving around the unearthing of harrowing narratives of individual suffering through survivor testimonies. These backgrounds speak to Rall et al.’s (2016, 188) findings that “[s]tatistical literacy remains lower than desired within the human rights advocacy world”.

As an interstitial social field, there is a significant overlap between human rights and the more operationally oriented humanitarian and development fields. This is reflected in the datasets: 25.3 per cent of Amnesty International and 21.2 per cent of Human Rights Watch employees had previously worked at humanitarian or development organisations. According to Mark Duffield (2018), humanitarianism has undergone a methodological and epistemological shift towards “post-humanitarianism”, wherein the integration of smart devices, big data, algorithms and remote sensing technologies into humanitarian governance have transformed the field’s logic from one of humanist solidarity to one of surveillance and resilience vis-à-vis the global precariat. Given the movement of professionals between these two fields, why has human rights practice resisted such a transformation? A key answer to this puzzle is that, despite overlapping networks of practitioners, the human rights advocacy field retains a degree of structural autonomy, as reflected in its logic of practice. While the humanitarian and development fields are increasingly organised around an operational and governance-oriented logic involving the delivery of services to and management of vulnerable populations, human rights advocacy follows a logic of political influence and performance of moral authority. In other words, the recipients of advocacy—be they violating states who are the target of shaming campaigns or more amenable political allies—must be persuaded to act based on moral imperatives.

Persuading policymakers, decisionmakers or other targets of human rights advocacy to act depends on two main legitimating factors: (1) the legitimacy of the advocate as a speaker, as signalled through virtuous performances, and (2) the disseminations of

persuasively framed and digestible advocacy products (e.g. reports, briefings, formal statements, blogs, videos or podcasts). Human rights advocates achieve symbolic distinction through a combined appeal to *non-partisan objectivity* and a *proximity to suffering* (Markland 2020, 177). As suggested above, appeals to legal expertise are the primary marker of objectivity in human rights practice, although appeals to quantitative data can also play this symbolic role. What most quantitative data cannot project is a sense of “being there”. Bearing witness to the violence perpetrated against victims of human rights abuses is a key legitimating factor that is achieved through qualitative reporting that emphasises narratives of individual suffering. The established credibility of human rights NGOs like Human Rights Watch and Amnesty International relies partly on their ability to extract testimonies from local contexts and then package individual victimhood for consumption by advocacy audiences (Markland 2020, 157). This emotional appeal to raw suffering allows the human rights report to construct “truth” through an “unflinching realism” (Hopgood 2006, 206).

In opposition to abstractive quantification, a more humanistic and qualitative methodological orientation plays a symbolic role in signalling ethnographic authenticity through on-the-ground field research involving interviews with the victims and witnesses of human rights abuses (Markland 2020, 181). Data gleaned from satellite image can also project this visual sense of proximity to suffering, and it is therefore no surprise that this is one digital technology that human rights advocates have adopted in recent years. But this does not extend to the abstractive tendency of advanced quantitative methodologies or statistical reporting which makes use of data. Furthermore, the persuasiveness of the advocacy message also relies on moral and legal clarity. Violations, violators, and perpetrators need to be neatly boxed into clear categories for the purpose of establishing clear lines of responsibility and action (Roth 2004). This leaves little room for the complexifying tendencies of big data analytics or machine learning algorithms. The murder of George Floyd by police on the streets of Minneapolis in May 2020 is particularly illustrative of this logic. The explosion of a global social movement in the aftermath of Floyd’s murder was certainly enabled by digital infrastructures, thanks to the incident being caught on a smartphone device and subsequently shared through online media. However, it was not quantitative data about police brutality which spurred worldwide protests in the wake of the incident. It was an individualised, vivid, and qualitative account of human suffering where clear lines could be drawn between violation, victim, and perpetrator. The cliché quotation dubiously associated with Joseph Stalin may also have some relevance here: “A single death is a tragedy; a million deaths is a statistic” (Quote Investigator 2010).

The temporal orientation of human rights practice is also important to consider. Much excitement around datafication is related to its anticipatory potential (Madsen et al. 2016, 283). For instance, inductive statistical analyses, aided by machine learning, have been useful for humanitarians in the management of crises because of the desire to contain emergent effects and manage risks (Chandler 2019, 26). However, human rights practice is not future oriented. It is primarily aimed at establishing simple lines of causality, remedying past abuses, and shaming past behaviours, rather than preventing imminent abuses. Unlike post-humanitarian governance, violations are perceived to be causative rather than correlative, contingent, or emergent. While it is not inconceivable that human rights organisations might explore anticipatory techniques in the future,

which could involve the prediction of potential violations using data analytics, this has not yet come to pass. Human rights practice remains retrospective and retroactive.

This logic of advocacy around which much human rights activism revolves is therefore key to understanding the apparent reluctance of the field to undergo a radical overhaul of its core methodologies. These established epistemic practices are embedded within the habitus of individuals and within the organisational cultures of leading NGOs like Amnesty International and Human Rights Watch. Being part of a professionalised field of practice, human rights advocates have a stake in the reproduction of their epistemic authority (Markland 2020, 134). It is a field with an entrenched methodology and epistemology, and lines of professional progression that stretch from leading Anglo-American law schools to elite-oriented human rights NGOs and international organisations (Markland 2020, 83–91). It is also a field with an oligarchical structure, whereby a handful of prestigious NGOs are financially and symbolically dominant. For instance, according to Thrall, Stecula, and Sweet (2014, 143), out of a sample of 257 human rights NGOs, the richest 10 percent hoard 92 percent of the sample's followers on Twitter. With this oligarchy comes a professional conservatism that reflects Ivan Illich's *Disabling Professions* (1977). Referring to the entrenched professional power of lawyers in the upper strata of society, Illich (1977, 51) argued that "the manner in which professions are able to educate communities about their "sacred role" does explain much in terms of why resistance, denial or blindness to the impact of technology occurs amongst the legal profession". Thus, protecting their accumulated moral and epistemic authority, human rights practitioners become resistant to dramatic changes in their established mode of knowledge production.

Thus, despite recurrent critiques of humanism within philosophy and the social sciences, what both post-humanist polemicists and those that hail the demise of liberal progressivism (in favour of computational governance) miss out upon is this entrenchment of professional humanists within social microcosms like the human rights field, and the motivating influence of humanism as a social and political logic (Latour 1993; Braiddotti 2013; Mitchell 2017). The practical humanism of human rights advocates is not a philosophical universalism as articulated in liberal political theory, but a durable disposition retained through the professional, cosmopolitan and bourgeois habitus of practitioners who have followed an educational and occupational trajectory that endows them with a field-specific cultural capital which favours qualitative over quantitative methodologies (Markland 2020, 106–107). A transformation of the field along the lines of datafication would require a methodological and epistemological retooling from the bottom-up, such as at the Ivy league law schools attended by graduates who are enrolled into the human rights elite, and a subsequent realignment of practitioner dispositions.

Given these dispositional barriers and practitioners' deep investment in their existing class of epistemic authority, it is not surprising that leading human rights NGOs have failed to undergo a digitally driven data revolution. While there have been some modest developments in the use of data-centric methods for human rights advocacy, these have been limited to the field's margins. The greatest strides in technology-led methodology and epistemic practice have not come from large NGO oligopolies like Amnesty International or Human Rights Watch, but from small think-tanks and university-affiliated research institutes like the Human Rights Data Analysis Group (2020) and

Forensic Architecture (2020). As I will argue in the next section, a Bourdieusian perspective can provide a broader theoretical contribution to understanding resistance to technological and epistemic transformations across different political and professional fields.

Explaining uneven epistemic transformations across global fields

As established in the first section of this article, proponents of what I have heuristically defined as the “transformation thesis” have emphasised the revolutionary ruptures wrought by digital connectivity and datafication. Some of these proponents illustrate these changes using field specific case studies, as with Duffield’s (2018) suggestion that the transition to a “cybernetic episteme” is reflected in humanitarian practice. Other authors have taken a more abstract view, including Chandler’s (2018) discussion of new modes of governance in the digital era, or the post-humanist drive to reconceptualise “humanity” under conditions of technological entwinement (Cudworth and Hobden 2013). These assertions of macro-level transformation are also supported by network sociology, led principally by Manuel Castells (2010) analysis of how revolutions in information technology, economic globalisation and an emergent “space of flows” interact to produce a new kind of “network society”. This linkage of societal transformation to economic forces is also characteristic of more critical anti-capitalist perspectives, as with the Marxist critique of “cognitive capitalism” (Moulier-Boutang 2012; Zuckerfeld 2017). Although these approaches differ in their conceptual frameworks, they are united in their ambition to highlight universal epistemic transformations brought about by technological change.

One of the pitfalls of these totalising perspectives is the neglect of the particular in favour of the universal. For instance, networked thinking encourages assumptions about lateral transformation across socio-political fields that are connected to the digital universe. But not all spheres of social or political activity move at the same pace when they are exposed to technological innovation. Datafication and digitalisation are processes that have uneven impacts on different social and political fields. For example, the testimony of Facebook’s CEO Mark Zuckerberg to the Senate Judiciary and Commerce Committees in April 2018, where US lawmakers appeared confused by the social media giant’s basic business model, is a stark illustration of the gap that still exists between the world of Big Tech and the operating logics of mainstream democratic politics (Stewart 2018). Bigo and Bonelli (2019, 115) have found that even in the field of transnational intelligence, a sphere that could have much to gain from algorithmic techniques, technological expertise tends to be contracted out to third parties while traditional, human-sourced intelligence approaches remain dominant. Therefore, grasping for totalising processes risks ignoring the empirical specificity of divergent social microcosms.

To remedy this blind side in transformationalist thinking, I assert the utility of applying Pierre Bourdieu’s field theory when conceptualising how certain spheres of social or political activity—including the field of global human rights advocacy discussed in the previous section—mediate pressures for epistemic transformation and potentially isolate technological changes and agents to the margins. Employing field theory, Ole Jacob Sending (2015, 11) sees global governance as divided into separate fields, where “actors compete with each other to be recognised as authorities on what is to be

governed, how, and why”. Examples of such fields include international development, security, peacebuilding, humanitarianism, and human rights advocacy. However, each field varies in terms of its specific “rules of the game” (Bourdieu and Waquant 1992, 99). Fields are bounded, game-like social structures that are constituted by a unique constellation of actors. These actors struggle for authority according to the field’s principles of legitimation (Bourdieu 1989, 17). These principles of legitimation, which define a field’s cultural capital, are durable to the extent that dominant actors remain invested in their reproduction. Actors’ prolonged immersion in these fields subsequently shapes their own practical sensibilities, so that the field’s logics are internalised as common sense within the habitus (Bourdieu 1990, 53). It is the embedment of the field’s *doxa* (common sense) within the habitus of invested actors that makes fields durable and resistant to radical transformations. As seen in the previous section, the rules governing the human rights field are associated with its logic of political influence, persuasion, and moral authority.

Critics of Bourdieusian field theory have argued that it is overly structuralist, reproductive, and cannot grasp “the ever-shifting constellations of actors, institutions, data and forms of expression that make up the expertise” (Waever and Leander 2018, 2). However, alternative approaches such as actor-network theory or assemblage-based theories fail to centralise the importance of social and political struggles between agents which are key in defining the trajectory of digitalisation and datafication. As Ruppert, Isin, and Bigo (2017, 3), “[d]ata does not happen through unstructured social practices but through structured and structuring fields in and through which various agents and their interests generate forms of expertise, interpretation, concepts, and methods that collectively function as fields of power and knowledge”. Similarly, “data is not an already given artefact that exists (which then needs to be mined, analysed, brokered) but an object of investment (in the broadest sense) that is produced by the competitive struggles of professionals who claim stakes in its meaning and functioning” (Bigo, Isin, and Ruppert 2019, 11). Technological change can influence the trajectory of different global political fields by enabling the entry of new types of actors (such as data consultants in the case of human rights advocacy), as well as by producing emergent sources of cultural capital and associated epistemic practices (such as expertise in geospatial imaging).

As Bigo and Bonelli (2019, 120) have observed in the case of the transnational intelligence field, technological change can be accompanied by the growing influence of private companies who “have played a substantial role in the recruitment of IT specialists, network engineers, data analysts, integration platform software designers, language and coding specialists, cryptologists, and mathematicians tasked with creating or combining algorithms”. Such entryism can have a revolutionary effect if those new actors are able to redefine a field’s organising logic, cultural capital, and principles of legitimation. For example, looking at the case of Sudan in the 1990s as an antecedent to the transformation of humanitarianism, Duffield (2018, 85) traces how donor governments asserted greater control over NGOs, who subsequently “seamlessly morphed into the ‘implementing partners’ of donor governments”. Alongside growing private sector partnerships, these developments stimulated the neoliberal re-alignment of the humanitarian field away from Third World solidarity and the progressive support for autonomous change and towards the governance of precarity. This exposed the field to an epistemic

transformation that privileged datafication based on a “surveillance logic of command and control” (*ibid.*, 168).

However, not all global political fields are so structurally conducive to this kind of radical transformation. The example of the human rights advocacy field illustrates how a strong autonomous organising logic—a logic of persuasion—generates entrenched forms of field-specific cultural capital—qualitative and humanistic accounts of raw suffering that establish clear legal responsibilities. Actors can mobilise digital or data infrastructures to diversify the range of tools and media at their disposal, as illustrated by the (limited) use of geospatial technology, data visualisations in human rights reporting, and a growing reliance on social media platforms to engage audiences. However, they do not necessarily threaten the epistemic practices that are at the centre of human rights advocacy. This is because the transformative potential of new technologies and methods depends on their epistemic, political, social, or moral value in the eyes of the fields’ dominant actors. The integration of data-based approaches has been one of slow adaptation, not revolution, and technological specialists—often employed as third-party consultants rather than as full-time human rights professionals—remain at the margins. The Bourdieusian concept of habitus is also helpful in illuminating how fields with strong professional structures and specific educational and career trajectories can endow members with enduring dispositions that favour both the reproduction of existing epistemic practices and resistance to new ones. The habitus of human rights professionals is still primarily defined by legal, journalistic, and liberal-cosmopolitan moral/political dispositions, rather than technological expertise. So long as processes of doxic reproduction remain stable, the potential for epistemic transformation through datafication remains limited.

Conclusion

This article has cautioned against the analytical trend towards treating datafication as a general process acting to radically transform the epistemic and governance practices across global political fields. Because different social and political fields are unique social microcosms that contain divergent organising principles, readers should be wary of post-humanist analyses making totalising claims about alleged transformations in the human condition. The polemical teleology of transformationalism, an approach that is in vogue among Silicon Valley hype merchants like Elon Musk, public intellectuals, and a growing number of social scientists, is certainly attention grabbing, but it does not measure up against the actual way in which technological and methodological innovations are instituted within different fields of practice. International relations and global governance scholars working on the interstitial cross-roads between technology and various political or social lifeworlds need to be attentive to how digital and data transformations are mediated at the meso level of global politics. This article has demonstrated how epistemic transformation can be resisted at the meso level through observing changes and continuities among elite human rights organisations. Bourdieusian field theory, with its emphasis on legitimacy, social reproduction, and the durability of practical dispositions, offers a suitable framework for conceptualising the absence of epistemic rupture within the field of human rights advocacy. However, because digitalisation and datafication processes are mediated through the specific logics of a given field, more

work needs to be done on examining how different organising principles shape the potentialities for epistemic transformation. Thus, in the future, more comparative empirical research will be needed to observe technological changes across different areas of global governance.

The above findings do not preclude the kinds data revolutions clearly taking place in terms of the operation of digital capitalism (The Economist 2019). Similarly, there is clear evidence that certain fields have reached a more advanced stage of transformation. For example, artificial intelligence and algorithmic techniques are spurring ruptures within the field of international security, where state and non-state actors alike are increasingly engaged within a technological arms race (Stevens 2020, 1). These ruptures are also leading to the establishment of new fields of practice. The field of cybersecurity is a case in point. Other fields are inherently more conducive to digital transformation and datafication due to their pre-existing practices, logics, and dispositions. For instance, datafication within the field of international development has been bolstered by the dominant position of economists at institutions like the World Bank and the Organization for Economic Co-operation and Development (Krause 2018, 134). Fields are not timeless or static entities, despite what a structuralist reading of Bourdieusian field theory might believe. There is potential for evolutionary or revolutionary change over time. As Waever and Leander (2018, 1) note, the growing heterogeneity and pluralism of political expertise generates potential for greater epistemic instability. Therefore, as digital technology advances towards a surveillance capitalism-driven Internet of Things, it is important to revisit the development of various fields over the coming years. The findings made in this article, such as the relative marginality of epistemic transformation within the human rights field, are therefore very much contingent and subject to re-evaluation as moves towards further digitalisation and datafication accelerate.

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References

- Amnesty International. 2018. "The Toronto Declaration: Protecting the Rights to Equality and Non-Discrimination in Machine Learning Systems". <https://www.amnesty.org/en/documents/pol30/8447/2018/en/>.
- Amnesty International. 2019. "Research" (2019). Accessed 19 September 2019. <https://www.amnesty.org/en/latest/research>.
- Amnesty International. 2020b. "Amnesty Tech" (2020b). Accessed 12 August 2020. <https://www.amnesty.org/en/tech>.
- Amnesty International. 2020a. "Amnesty Decoders". Accessed 5 February 2020. <https://decoders.amnesty.org>
- Aradau, Claudia, and Tobias Blanke. 2018. "Governing Others: Anomaly and the Algorithmic Subject of Security." *European Journal of International Security* 3 (1): 1–21.
- Aronson, Jay. 2015. "Mobile Phones, Social Media, and Big Data in Human Rights Fact-Finding." In *The Transformation of Human Rights Fact-Finding*, edited by Philip Alston, and Sarah Knuckey, 441–462. Oxford: Oxford University Press.
- Berry, David. 2011. "The Computational Turn: Thinking About the Digital Humanities." *Culture Machine* 12: 1–22.
- Berry, David. 2019. "Against Infrasonatization: Towards a Critical Theory of Algorithms." In *Data Politics: Worlds, Subjects, Rights*, edited by Didier Bigo, Engin Isin, and Evelyn Ruppert, 43–63. London: Routledge.
- Bigo, Didier, and Laurent Bonelli. 2019. "Digital Data and the Transnational Intelligence Space." In *Data Politics: Worlds, Subjects, Rights*, edited by Didier Bigo, Engin Isin, and Evelyn Ruppert, 100–122. London: Routledge.
- Bigo, Didier, Engin Isin, and Evelyn Ruppert. 2019. "Data Politics." In *Data Politics: Worlds, Subjects, Rights*, edited by Didier Bigo, Engin Isin, and Evelyn Ruppert, 1–17. London: Routledge.
- Boswell, Christina. 2009. *The Political Uses of Expert Knowledge*. Cambridge: Cambridge University Press.
- Bourdieu, Pierre. 1989. "Social Space and Symbolic Power." *Sociological Theory* 7 (1): 14–25.
- Bourdieu, Pierre. 1990. *The Logic of Practice*. Palo Alto: Stanford University Press.
- Bourdieu, Pierre. 1998. *Practical Reason: On the Theory of Action*. Stanford: Stanford University Press.
- Bourdieu, Pierre, and Loïc Waquant. 1992. *An Invitation to Reflexive Sociology*. Chicago, IL: University of Chicago Press.
- Braidotti, Rosi. 2013. *The Posthuman*. Cambridge: Policy Press.
- Brennan, Scott J., and Daniel Kreiss. 2016. "Digitalization." In *The International Encyclopedia of Communication Theory and Philosophy*, edited by Klaus Bruhn Jensen and Robert T. Craig, 556–565. Oxford: Wiley.
- Castells, Manuel. 2010. *The Rise of the Network Society*. 2nd ed. Oxford: Wiley-Blackwell.
- Chandler, David. 2015a. "A World Without Causation: Big Data and the Coming of Age of Posthumanism." *Millennium: Journal of International Studies* 43 (3): 833–851.
- Chandler, David. 2015b. "Rethinking the Conflict-Poverty Nexus: From Securitising Intervention to Resilience." *Stability: International Journal of Security and Development* 4 (1): 1–14.
- Chandler, David. 2018a. "Conflict Knowledge, Big Data and the Emergence of Emergence." In *Assembling Exclusive Expertise: Knowledge, Ignorance and Conflict Resolution in the Global South*, edited by Ole Wæver, and Anna Leander, 170–186. Abingdon: Routledge.
- Chandler, David. 2018b. *Ontopolitics in the Anthropocene: An Introduction to Mapping, Sensing and Hacking*. Abingdon: Routledge.
- Chandler, David. 2019. "Digital Governance in the Anthropocene: The Rise of the Correlational Machine." In *Digital Objects, Digital Subjects: Interdisciplinary Perspectives on Capitalism, Labour and Politics in the Age of Big Data*, edited by David Chandler, and Christian Fuchs, 23–42. London: University of Westminster Press.

- Cudworth, Erika, and Stephen Hobden. 2013. "Complexity, Ecologism, and Posthuman Politics." *Review of International Studies* 39 (3): 643–664.
- Cudworth, Erika, and Stephen Hobden. 2017. "Post-human Security." In *Global Insecurity: Futures of Global Chaos and Governance*, edited by A. Burke, and R. Parker, 65–81. London: Palgrave Macmillan.
- Cukier, Kenneth, and Viktor Mayer-Schönberger. 2017. *Big Data: A Revolution That Will Transform How We Live, Work, and Think*. London: John Murray.
- Dencik, Lina, Arne Hintz, and Jonathan Cable. 2019. "Towards Data Justice: Bridging Anti-Surveillance and Social Justice Activism." In *Data Politics: Worlds, Subjects, Rights*, edited by Didier Bigo, Engin Isin, and Evelyn Ruppert, 167–186. London: Routledge.
- Dezalay, Yves, and Bryant G. Garth. 2006. "From the Cold War to Kosovo: the Rise and Renewal of the Field of International Human Rights." *Annual Review of Law and Social Science* 2: 231–255.
- Dubberley, Sam. 2019. "The Digital Verification Corps: Amnesty International's Volunteers for the Age of Social Media". *Citizen Evidence*. Accessed December 6. <https://citizenevidence.org/2019/12/06/the-digital-verification-corps-amnesty-internationals-volunteers-for-the-age-of-social-media>.
- Duffield, Mark. 2018. *Post-Humanitarianism: Governing Precarity in the Digital World*. Cambridge: Polity Press.
- The Economist. 2019. "March of the Machines: The Stockmarket is Now Run by Computers, Algorithms and Passive Managers." <https://www.economist.com/briefing/2019/10/05/the-stockmarket-is-now-run-by-computers-algorithms-and-passive-managers>.
- Emerson, John, Margaret L. Satterthwaite, and Anshul Vikram Pandey. 2018. "The Challenging Power of Data Visualization for Human Rights Advocacy." In *New Technologies for Human Rights Law and Practice*, edited by K. L. Molly, and Jay D. Aronson, 162–187. Cambridge: Cambridge University Press.
- Forensic Architecture. 2020. "Agency". Accessed 28 December 2020. <https://forensic-architecture.org/about/agency>.
- Goetze, Catherine. 2017. *The Distinction of Peace: A Social Analysis of Peacebuilding*. Ann Arbor: University of Michigan Press.
- Gutiérrez, Miren. 2018. *Data Activism and Social Change*. Cham: Palgrave Macmillan.
- Hilbert, Martin. 2013. "Big Data for Development: From Information- to Knowledge Societies", SSRN (2013). <https://ssrn.com/abstract=2205145> or <http://dx.doi.org/10.2139/ssrn.2205145>.
- Hopgood, Stephen. 2006. *Keepers of the Flame: Understanding Amnesty International*. London: Cornell University Press.
- Human Rights Data Analysis Group. 2020. "About Us". Accessed 11 August 2020. <https://hrdag.org/aboutus>.
- Human Rights Methodology Lab. 2020. "About". Accessed 11 August 2020. <https://www.humanrightsmethodologylab.org/about.html>.
- Human Rights Watch. 2016. "Innovative Lab Launched to Strengthen Human Rights Work". <https://www.hrw.org/news/2016/02/02/innovative-lab-launched-strengthen-human-rights-work>.
- Human Rights Watch. 2018. "'Eradicating Ideological Viruses' China's Campaign of Repression Against Xinjiang's Muslims". <https://www.hrw.org/report/2018/09/09/eradicating-ideological-viruses/chinas-campaign-repression-against-xinjiangs>.
- Human Rights Watch. 2019a. "China's Algorithms of Repression: Reverse Engineering a Xinjiang Police Mass Surveillance App". <https://www.hrw.org/report/2019/05/01/chinas-algorithms-repression/reverse-engineering-xinjiang-police-mass-surveillance>.
- Human Rights Watch. 2019b. "Publications". Accessed 19 September 2019. <https://www.hrw.org/publications>.
- Human Rights Watch. 2020. "People". Accessed 24 February <https://www.hrw.org/about/people>.
- Illich, Ivan. 1977. "Disabling Professions." In *Disabling Professions*, edited by Ivan Illich. London: Marion Boyars Publishers.

- Johansson, Håkan, and Gabriella Scaramuzzino. 2019. "The Logics of Digital Advocacy: Between Acts of Political Influence and Presence." *New Media and Society* 21 (2): 1–19.
- Kaltofen, Carolin. 2018. "With a Posthuman Touch: International Relations in Dialogue with the Posthuman – a Human Account." In *Posthuman Dialogues in International Relations*, edited by Erika Cudworth, Stephen Hobden, and Emilian Kavalski, 32–51. Abingdon: Routledge.
- Krause, Keith. 2018. "Bodies Count: the Politics of Assembling war and Violent Death Data Expertise." In *Assembling Exclusive Expertise: Knowledge, Ignorance and Conflict Resolution in the Global South*, edited by Ole Waever, and Anna Leander, 129–152. Abingdon: Routledge.
- Latour, Bruno. 1993. *We Have Never Been Modern*. Cambridge Massachusetts: Harvard University Press.
- LinkedIn. 2020a. "Amnesty International". Accessed 14 February 2020. <https://www.linkedin.com/company/amnesty-international/people>.
- LinkedIn. 2020b. "Human Rights Watch". Accessed 24 February 2020. <https://www.linkedin.com/company/human-rights-watch>.
- LinkedIn. 2020c. "Privacy Policy". Accessed 28 December 220. <https://www.linkedin.com/legal/privacy-policy>.
- Livingston, Steven. 2016. "Digital Affordances and Human Rights Advocacy." *SFB-Governance Working Paper Series* 69: 1–30.
- Lyon, David. 2019. "Surveillance Capitalism, Surveillance Culture and Data Politics." In *Data Politics: Worlds, Subjects, Rights*, edited by Didier Bigo, Engin Isin, and Evelyn Ruppert, 64–78. London: Routledge.
- Madsen, Anders Koed, Mikkel Flyverbom, Martin Hilbert, and Evelyn Ruppert. 2016. "Big Data: Issues for an International Political Sociology of Data Practices." *International Political Sociology* 10: 275–296.
- Markham, Annette N., Katrin Tiidenberg, and Andrew Herman. 2018. "Ethics as Methods: Doing Ethics in the era of big Data Research—Introduction." *Social Media + Society* 4 (3): 1–9.
- Markland, Alistair. 2020. *NGOS, Knowledge Production and Global Humanist Advocacy: The Limits of Expertise*. Abingdon: Routledge.
- McPherson, Ella. 2018. "Risk and the Pluralism of Digital Human Rights Fact-Finding and Advocacy." In *New Technologies for Human Rights Law and Practice*, edited by K. L. Molly, and Jay D. Aronson, 188–214. Cambridge: Cambridge University Press.
- McPherson, Ella, Isabel Guenette Thornton, and Matt Mahmoudi. 2020. "Open Source Investigations and the Technology-Driven Knowledge Controversy in Human Rights Fact-Finding." In *Digital Witness: Using Open Source Information for Human Rights Investigation, Documentation, and Accountability*, edited by Sam Dubberley, Alexa Koenig, and Daragh Murray. Oxford: Oxford University Press.
- Mitchell, Audra. 2017. "'Posthuman Security': Reflections from an Open-Ended Conversation." In *Reflections on the Posthuman in International Relations: The Anthropocene, Security and Ecology*, edited by Clara Eroukhanoff, and Matt Harker, 10–18. Bristol: E-International Relations Publishing.
- Moulier-Boutang, Yann. 2012. *Cognitive Capitalism*. Cambridge: Polity Press.
- Piracés, Enrique. 2018. "The Future of Human Rights Technology: A Practitioners View." In *New Technologies for Human Rights Law and Practice*, edited by K. L. Molly, and Jay D. Aronson, 289–308. Cambridge: Cambridge University Press.
- Quote Investigator. 2010. "A Single Death Is a Tragedy; A Million Deaths Is a Statistic". <https://quoteinvestigator.com/2010/05/21/death-statistic/>.
- Rall, Katharina, Margaret L. Satterthwaite, Anshul Vikram Pandey, John Emerson, Jeremy Boy, Oded Nov, and Enrico Bertini. 2016. "Data Visualization for Human Rights Advocacy." *Journal of Human Rights Practice* 8 (2): 171–197.
- Roth, Kenneth. 2004. "Defending Economic, Social and Cultural Rights: Practical Issues Faced by an International Human Rights Organization." *Human Rights Quarterly* 26: 63–73.
- Ruppert, Evelyn, Engin Isin, and Dider Bigo. 2017. "Data Politics." *Big Data & Society* 4 (2): 1–7.
- Satellite Sentinel Project. 2015. "Our Story" (2015). <http://www.satsentinel.org/our-story>.

- Schwartz, Elke. 2017. "Hybridity and Humility: What of the Human in Posthuman Security?" In *Reflections on the Posthuman in International Relations: The Anthropocene, Security and Ecology*, edited by Clara Eroukhmanoff, and Matt Harker, 20–38. Bristol: E-International Relations Publishing.
- Sending, Ole Jacob. 2015. *The Politics of Expertise: Competing for Authority in Global Governance*. Ann Arbor: University of Michigan Press.
- Singer, Peter. 2015. *The Most Good You Can Do: How Effective Altruism Is Changing Ideas About Living Ethically*. New Haven: Yale University Press.
- Stevens, Tim. 2020. "Knowledge in the Grey Zone: AI and Cybersecurity." *Digital War*, 1–7.
- Stewart, Emily. 2018. "Lawmakers Seem Confused about What Facebook Does — and How to Fix It." *Vox*. <https://www.vox.com/policy-and-politics/2018/4/10/17222062/mark-zuckerberg-testimony-graham-facebook-regulations>
- Thrall, Trevor, Dominik Stecula, and Diana Sweet. 2014. "May We Have Your Attention Please? Human Rights NGOs and the Problem of Global Communication." *The International Journal of Press/Politics* 19 (2): 135–159.
- United Nations. 2011. *Report of the Secretary-General's Panel of Experts on Accountability in Sri Lanka*. New York: United Nations.
- Vaucher, Antoine. 2011. "Interstitial Power in Fields of Limited Statehood: Introducing a 'Weak Field' Approach to the Study of Transnational Settings." *International Political Sociology* 5: 340–345.
- Waever, Ole, and Anna Leander. 2018. "Introduction – Assembling Exclusive Expertise: Knowledge, Ignorance and Conflict Resolution in the Global South." In *Assembling Exclusive Expertise: Knowledge, Ignorance and Conflict Resolution in the Global South*, edited by Ole Waever, and Anna Leander, 1–20. Abingdon: Routledge.
- Zuboff, Shoshana. 2019. *The Age of Surveillance Capitalism*. London: Profile Books.
- Zukerfeld, Mariano. 2017. *Knowledge in the Age of Digital Capitalism: An Introduction to Cognitive Materialism*. London: University of Westminster Press.