'But what for?': On the potentials of acknowledging scholastic positionalities

Junck, Leah University of Cape Town leah.junck@uct.ac.za

Abstract

Topics around 'big data' have both the potential to connect and divide scholars. This paper seeks to highlight some of the conceptual and scholastic exclusions by outlining my experience of entering the DH discipline as an anthropologist. The question 'but what for?' that was posed to me at the first conference I attended with regards to my research approach inspired me to think through methodological positionalities more seriously, which tend to reproduce old dissociations of that which can be quantified from everyday experience. An outline of the historical developments of the discipline of anthropology serves as an illustration of how understandings of scholarship (and relationships to other fields of study) may shift over time - and yet become firmly linked to methodological approaches as well as scholarly identities. In making sense of what it means to live in an increasingly data-saturated world and to bring humanistic analysis in conversation with the digital, DH scholars have to take active steps in opening up conceptual frameworks interdisciplinary communication. This also means including a wider range of humanities scholars and fringe DH views. Grappling with the shifting power dynamics and accelerated changes in lived experience prompted by digitisation, I suggest, should also involve critically engaging with how we as scholars think about ourselves in relation to the methods we use, and becoming comfortable with the idea of their/our incompleteness.

Keywords: Digital Humanities, humanism, incompleteness, disciplinary positionality, methods, knowledge production

Introduction

What DH entails is by no means a new question nor is what DH should entail. Indeed, there are many interpretations of DH with past discussions having led to a lexical shift from the 'Humanities Computing' to the Humanities'. In 2012, Liu [1] made an argument for more cultural criticism in order for humanist ideas to become fully itegrated into DH. Rarely, the author remarked, do discussions in this context incorporate a broader register of society, economics, politics, or culture. Partly, Liu said, this is due to disagreements in terms of how data ought to be looked at - through close or distant reading. How DH may advance will depend on how the relationships between data and power today become challenged, a question Liu found to be hardly brought up in DH associations, conferences, journals, and projects.

Some recent publications have grappled with questions of who and what matters in DH, including discussions on diversity intersectionality [9,10],and postcoloniality [11,12]. Also subject of conversation were the slippery boundaries of DH and the making of knowledge in this context [13], as well as the risks imbued in DH criticisms taking on zero-sum rhetorics [14]. While there are insightful contributions that include suggestions in terms of what critical lenses to apply, the integration scholars who wear very different disciplinary goggles under the umbrella term 'Digital Humanities' remains a neglected topic.



My first encounter with DH as an anthropologist and novice to the interdisciplinary field suggests that the ways in which data issues are addressed continue to be somewhat discrete, even though computers and digital data have formed part of the work across the humanities for a couple of decades by now. Instead of creating allies among humanists, old dichotomies distinguishing between 'hard' and 'soft', qualitative and quantitative appear to have solidified even within DH - a field premised on cross-disciplinary exchange. In the following, I thus make a case for rethinking how we can move towards a lived disciplinary hybridity in DH. This is key to rendering critical discourse, the absence of which Liu already regretted a decade ago, integral to DH. One way of doing this is by recognising that approaches to data are part of everyday experience - for those we study and for us as researchers. The ways in which we look at data conceptually and methodologically are crucial for the kinds of connections and queries that become possible within DH. I argue that if DH is to mature into a field that really grapples with pertinent ethical questions of being human in the digital age, a more investigative attitude accross knowledge fields and their attitudes towards data must ought to be encouraged.

I manifest my argument by outlining the development of methodological gold standards in the discipline I am myself at home with: social anthropology. Coming from a particular school of thought, cultivated in specific ways, renders an actual transcendence of disciplined schools of knowledge challenging. Likely, this is one reason that previous calls to embed cultural criticism into DH have not been translated into common practice. Furthermore, I address how data may be thought of in ways that bring disciplines within DH into a more attentive, less restrained dialogue. This requires us as scholars taking a step back from our career pathways, from what we think we know about the world and each other as scholars. Trading familiarity reorientation, and knowledge-claims for the acknowledgement of incompleteness [15] to that effect is worthwhile. A willingness to accept the discomfort imbued in this reorientation is a prerequisite for engaging with other ways of thinking through data earnestly.

Entering DH

By virtue of my research interest in how dating applications (apps) are used to establish intimacy in the context of Cape Town (South Africa), I had the opportunity to attend my first DH conference in 2019 in Utrecht (Netherlands). The conference theme 'complexities' appealed to me. It is a keyword that strikes a familiar chord in line with recurring discussions at the department where I was trained in social anthropology. The 'Digital Humanities: the perspective of Africa' workshop leading up to the conference had been filled with the practising of unfamiliar digital programme, instructed in a jargon that did not feel native to me and that demanded steady focus. The idea of connecting with scholars from various disciplines triggered a warm sense of excitement and opportunity. My decision to research dating apps, I thought to myself, turns out to open both conceptual and epistemological doors to new branches of knowledge.

A week later, however, my enthusiasm was simmering on a much lower flame. At the DH2019 conference itself, a feeling of disciplinary foreignness started washing over me.

It was also here that I realised the extent to which the 'focus on Africa', intended to extend collaborations with African scholars, had been limited to our workshop as a satellite event, which was very much disintegrated from the main conference. The event theme and the circumstance that the renowned anthropologist (and my PhD supervisor) Prof. Francis Nyamnjoh was keynote speaker had me expecting something different from what I encountered. Questions I had just started dissecting and desired engaging with further concerning the ethics of digital practices and what they mean for the 'Humanities' portion of 'DH' seemed to merely be tangent to the numerous presentations. Many of these seemed to treat digitised practices of archiving and language processing as contained practices, separate from the social. Where were the anthropologists and sociologists, philosophers and artists, the historians, and political scientists - where the more existential conversations about what it means to be human in increasingly digitised contexts? And where the questions of what computation enables and erases? Disappointingly, the digitisation of human experience, its means, tools, and applications were barely clothed in broader questions as to how the very real effects of such endeavours are experienced - especially by cohorts that tend to be overlooked.

A discordance in conceptual and methodological viewpoints was also reflected in conversations at the conference. Surprisilgy, my response to the customary question 'and what do you do?' during coffee breaks, explaining my exploratory focus on dating-app experiences, did not evoke as many follow-up questions as I am used to, probing for narratives. As the event progressed, I kept thinking about the apparent lack of shared language - to which my inexperience with such events surely contributed. It was my first conference in general to attend and I was arriving straight from the comfort and familiarity of the moderately sized anthropology department at the University of Cape Town with its fairly predictable lingo. My notion of scholarly disorientation climaxed during the ceremonious

closing of the conference in the St Catherine's Cathedral when a fellow participant responded with a mystified expression 'But what for?' when I outlined my qualitative, non-representative advance towards the topic of dating apps.

Estill et al. call attention to conferences as central sites for setting the agenda of knowledge production, and the role of the Alliance of Digital Humanities Organization (organiser of the annual flagship DH conference that I attended in 2019) in that regard [16]. The organisation's large-scale events have doubled in size in the past decade. Yet, the authors, who had all been part of organising these conferences, show that rather than drawing on a variety of views and approaches, diversity remains hamstrung in terms of gender, ability, career stage, themes, linguistics, regionality, and disciplines. Data collected on these conferences epitomizes that they have become slightly more collaborative and regionally varied in the past years, but that text and literature reign supreme, and women remain underrepresented [17]. A relatively narrow peer reviewer pool and limited representations on the programme committee appear to be among the reasons for the lag in diversification [16].

Overall, DH has been the under the purview of only a small number of prominent and wellinstitutions [18], restraining composition. Gornall and Bhattacharyya [19] suggest that to broaden DH's cultural scope, there must also be a more open, global engagement with research that may not identify disciplinarily as DH. In fact, a lot of important work on automation, warning about the experiential divides it produces, emerge under other disciplinary headings. While there are numerous critical social sciences contributions on digital developments, and a growing body of research concerned with how technologies form part of everyday life, there has been little consideration of the role of research methodologies [20]. Moreover, rarely has the potential of their co-presence in projects that fall under DH been discussed in ways that help

researchers break away from arduously cultivated worldviews.

Methodological gold standards

Befittingly, all scholarly fields have their way of verifying knowledge. Throughout the training and formation of professional identity, their rationale starts forming part of our embodied ways of knowing. In Anthropology, making arguments for the legitimacy of long-term, indepth, small-scale research is routine and part of every dissertation. Ever since the institutional divide between the humanities and natural sciences, scholars have advocated for the righteous place of the former among fields considered 'harder', more concrete representative. Events like economic recessions or the COVID-19 global health crisis serve as justifications for governments and universities to reduce funding for the humanities and arts in favour of fields with more measurable and predictive outcomes, firming a notion of scholarly unrelatedness.

In defending its existence next to the 'hard' sciences, the discipline of anthropology has held on tightly to a very particular set of methodologies. With the advent of 'participant observation', a research practice coined by Bronislaw Malinowski [21] who is commonly referred to as the father of anthropology, being engrossed in the research context became key paradigm and marker for validity in the field. Clifford Geertz's [22] encouragement to use 'thick' and context-rich descriptions in observing what would have to be a small sample is still the anthropological gold standard when trying to understand societies 'from within'. Back then, this was a major move away from so-called 'armchair anthropology', which refers to the forming of knowledge from the distance. Armchair anthropology in particular would often result in the 'othering' of cultural groups due to an 'epistemology of alterity' challenged by Mafeje [23]. Immersive fieldwork and participant observation with its close entanglements are also what made me develop a growing appreciation for the discipline of anthropology in the first place.

Earlier works of anthropologists were exclusively concerned with the study of small-scale societies that were considered traditional or customary, often disregarding their capacity to change. With reflections on the fluidity of societies becoming commonplace, foci on the exotic 'other' shifted to encompass all kinds of human experience. Among many other emergent sub-fields, there is now an anthropology of economics, workplace anthropology and digital anthropology. Digital anthropology and its ways of showcasing how computational processes become part of day-today life is an area in which the unsettled nature of social phenomena can be excellently exemplified. Apart from interests in computational developments and their social effects, new mechanisms for recording and analysing information have also replaced the notebook as the main companion of the ethnographer of societies (although I personally always keep one at hand).

The task of thinking about the digital world, Miller [24] says, is perhaps the final repudiation of the illusion of static societies and may produce a more balanced or rounded discipline that is equally concerned with the entire spectrum of human experience. Some individual anthropologists demonstrated interest technologies and in detailing their social impact from the early developing stages of the computing industry. Margret Mead [25], for instance, saw prospect in the field of cybernetics for a form of cross-disciplinary thought, which makes it possible for members of many disciplines to communicate with each other easily in a language all can understand.

More recently, there have also been efforts amongst some to rebrand themselves as applied anthropologists, meaning that they use the disciplines' unique set of immersive methods to solve practical problems, may they environmental, focusing on businesses or museums. They may also encompass things like studying online user experiences, thereby bringing 'thick' and big data in conversation. Nevertheless, applied anthropology is still

considered an alternative to (and not part of) academia, and digital anthropology a subdiscipline instead of being integrated into the field of study. Meanwhile, people outside of anthropology often associate the discipline with something ancient and struggle to understand what its well-preserved methodological technique is all about. With new technologies being typically considered separate from society and culture as Ingold [26] suggests, it is unsurprising that contributions to the field of technology and computing by anthropologists have overall been limited.

I strongly agree with Miller [24] that there is a prime opportunity to think about these shifts as part of much wider methodological debates. These should include a re-examination of how we think about our humanity (who is considered human and why), and how one may think through the extending and limiting effects of digital means. Keeping an open mind in terms of the purpose and modi operandi of other fields of study would require cultivating more patience for knowledge production as a collaborative endeavour. It would also mean considering scholarship an intellectual pursuit, animated by shared curiosities, and fuelled with rigorous contemplation, as suggested by Nyamnjoh [27].

Making sense of accelerated change

As mentioned, recent years have seen numerous important publications by scholars who highlight the social injustices that result from the embedding of digital economies into the daily lives of a growing number of people. These point out that computing encompasses more than statistical utility and processing. Machines do not merely absorb input and deliver results. Such reductionist views foster notions of technologies being utterly separate to the human experience.

Certain is that the digitisation of everyday life hinges on human labour and natural resources. It also comes at significant socio-environmental costs and proliferates/normalises practices of social exclusion [e.g., 28-37]. Even with these insights into the sacrifices that digital innovations demand, investments into technologies as a simple fix to societal problems become more and more wishful, their reach into daily lives more intrusive, and their usage part of bodily existences. What is more, while humans are key to the workings of any algorithm-driven computation, their experiences continue to be remarkably neglected. This is despite them potentially offering a way of knowing from the inside, as Ingold [38] puts it, grounded in humanmachine interaction.

The proliferation of social media and artificial intelligence behooves scholars to let go of the illusion that they have a monopoly of representation and that being human can be easily captured. Whether it is consumption, finances, policing, justice, democracy, or art – few routines remain untouched by computational logics. Bringing diverse schools of thought concerned with aspects of human existence into conversation with one another might be a step towards cultivating a collective scholarship concerned with the human as an individual and intersubjective being, exposed to new webs of data-driven power. Calls for more exchange across disciplines in exploring these intersections may be elementary and old – but they remain the crux to a pluralisation of knowledge. Without integrating sundry vantage points, how would it be it possible to ask questions in ways that help us understand the nodes between ourselves and machines better and to avoid unwittingly reproducing divides between computational predictability versus incalculable experience?

Nyamnjoh's [27] idea of convivial scholarship is helpful in aiding integrations of seemingly converging ideas into a shared discourse. According to the author, embracing the normalcy of incompleteness lies at the heart of a truly convivial scholarship. When recognising an inherent compositeness of being, there is no reason to cling to what he calls unproductive fixations with disciplinary boundaries and credos. A convivial scholarship in Nyamnjoh's sense mean less attachment to one's epistemological and methodological harness. Traditions of knowing and knowledge-making

may only then be imagined anew. Favouring ambits over visions of complete knowledge would also demand a confrontation with the insecurities of knowledge production, exposed when taking a step back from siloed comforts and the politics underlying academic practices of reward. Collective explorations, through convivial scholarship, are not necessarily meant to provide final answers, but everevolving, exciting perspectives.

Big data as a topic has indeed triggered an upsurge of interdisciplinary collaboration that to integrate distinctive methodologies. Even so, as the next section will show, these can end up in collaborative blockage in lieu of facilitating a convivial scholarship akin to what Nyamnjoh envisions. This is not just because of the attachment to the concepts and methods that have become internalised as benchmarks for academic validity. The ways in which data as the 'stuff' of digitisation and computation is imagined and made sense of by researchers determines whether we become connected or divided as scholars thinking through the same augmentations along different

Envisioning the future through big data

Kirschenbaum [39] says that, at its core, DH is less of an investment in specific sets of texts or even technologies but can be described as a common methodological outlook. I agree with Kirschenbaum's notion that DH is essentially a social undertaking, harbouring networks of people, some of whom have been working together, sharing research, arguing, competing, and collaborating for many years. What I would like to stress, once more, is that the invitation does not automatically extend towards all the humanities fields that could contribute to this network. I also want to really accentuate the dearth of discussion around scholarly areas in which methodological outlooks are more difficult to reconcile and may provoke wariness among scholars - even when the intention is to connect ideas. The negotiations relating qualitative and quantitative methods that Liu [1] observed 10 years ago (the former premised on a tacit

understanding and the latter on the rigour of programmatic understanding) are ongoing. How they may pan will hinge on scholarly selfreflection and coming to terms with the incomplete nature of what we think we know.

An example for such a negotiation is the experience anthropologist Hannah Knox [40] reports when brought onto a project to add a qualitative research perspective. The project was concerned with the impact of weather on local zoo visits. Since it also covered the modelling of future climatic conditions, the team was largely quantitatively oriented. Climate change and the data related to it served as a connecting topic - as an opportunity for interdisciplinary invigoration and the reconnecting of often ideologically disconnected ideas of what is social and what is natural. In practice, however, this was a much less straightforward task and led to the researcher having to defend the very qualitative methods that she had been brought on board to incorporate.

Some of the staff questioned the ability of qualitative tools to produce the 'right' kind of data. This had to do with how ethnography (the anthropologist's method of choice/validation) is perceived. Anthropology is interested in capturing and describing the things that make life messy and unpredictable. The premise that ethnography starts from is that it is impossible to know everything at play in a given social or natural situation. As a method of description, Knox explains, ethnography begins with the concrete and moves towards broader relationships instead of the other way around. It looks at how things become rearranged. Unlike research using predictive models imagining the present and future on the grounds of a baseline, data here is not verified by looking at models. Knowledge claims rather are rooted in localising experience and illustrating in great detail how developments relate to structures - not causationally but loosely held together by always shifting components.

Blockages of interdisciplinary flows of ideas are not necessarily always one-sided from the more



numerical fields towards anthropology as a descriptive and exploratory field. Anthropology is a form of research that defines itself through the idea of rendering the familiar strange (temporarily disassociating ourselves from what we think of as factual). It also gives weight to the positionality of the researcher in understanding social phenomena. Nonwithstanding this strong focus on reflexivity, the assumption that ethnographic relationships with data are 'richer' or 'deeper' compared to other methods, as Knox points out, is often taken for granted. Treating divergent scholarly investigations as though they begin from the same ontological onset is thus where the author finds engagements with data practices in anthropological works to fall short. Knox elaborates:

What differentiates ethnographic description from computer models is not the proximity to the story told to an actually existing reality but the relational assumptions upon which claims to truth are made. Moving beyond cultivated oppositions to different disciplines dealing with quantification or numbers and that of qualitative data or text. Numbers can be part of ethnographic truth-making' (p.145).

How, then, do we find a common language regardless of epistemologically engrained resistances? How can we work towards convivial scholarship and avoid collaborative blockage? Knox suggests thinking more expansively about how to engage data analytically. DH could play a vital role here if the field were to commit to diversitfying further. As for anthropologists, data can be better made sense of by treating numerical data in socio-technical entanglements just like ethnographic facts: 'As points on a web that we respin through description' (p.145).

Conclusion

Despite the interdisciplinarity credos of DH, the 'Humanities' aspect of the scholarly area is certainly not exhausted, and my conference baptism was reminiscent of a persistent dissociation of computation from day-to-day human experience. My sense of disciplinary foreignness in this context was indicative of how solidly ideas of intellectual purity persist, extending exclusionary practices even into settings where change and collaboration are praised as the way of the future.

My outline of how the discipline of anthropology has developed to date exemplifies how understandings of scholarship and what it means to be human may shift over time - and still become firmly moulded into methodological practice. So do assumptions of maturing into a complete scholar by adopting certain paradigms. In times of rapid global change, binary distinctions between 'hard sciences' versus 'soft sciences' become substantiated ever so firmly including all kinds of oppositional paradigms: objective and subjective, social and numerical, exploratory and exactitude, fact and theory. However, neat distinctions only obscure human realities and do not carry any satisfying fruits from individual scholarly apart, perhaps, recognition. They contribute to the perpetuation of one hegemonic version of reality, drowning out an array of stories told by people in their own words.

Attending the DH2019 conference (and a few DH online events since then) compelled me to face my own disciplinary guardedness and kindled a desire to be part of the collaborative works that DH intends to promote. The experience of discomfort and disciplinary forignness convinced me that there is an obligation to continuously revaluate the meanings that the 'H' in 'DH' can and should hold. Inviting a larger variety of humanists to the roundtable concerned with computation is imperative to enabling a move away from overly optimistic or pessimistic views on digital developments. The challenges of collaboration and communication this comes with exist - regardless of whether they are given visibility in conference settings. But expanding their scale as part of DH events may also ampify the quality of discussions. An anthropological mode of thinking, starting with mundane, everyday experiences and extending the thought-scale from there, constitutes an important addition when dealing with the existential questions that render DH a crucial and determining field of enquiry.

Working through the epistemological 'baggage' that scholars of varying backgrounds carry along is long overdue and a step en route to cultivating a language in DH that incorporates our multiple visions as scholars. Digital spaces are living spaces with shortcomings and asking ethical questions forms part of identifying the pushes and pulls at play within them. With matters of human existence and experience on their agenda, social science scholars, philosophers, artists, historians, political scientists, law scholars, psychologists, theologists and others can offer valuable contributions, and actively extending invitations toward them is a necessary first step. Their insights are particularly vital where computers become a replacement for human labour, affection, or thoughtful input as we can witness in the fast-paced development of artificial intelligence - an area that requires better definition and boundaries.

Apart from their achievements, digital technologies and data also serve as means to consider what we want the future to look like. Thinking through the questions of humanity that an increasing integration of computational technologies into everyday routines bring up requires the assemblage of big and 'thick' data. Put differently: it beseeches an unashamed exploration of scholarly positionalities.

Acknowledgements

I would like to express my gratitude for the invitation to attend the workshop Digital Humanities: the perspective of Africa, a satellite event of the DH2019 hosted by the Lorentz Center in Leiden, Netherlands.

References

- [1] Liu, A 2012, Where is cultural criticism in the digital humanities?', in Gold, M (ed.) Debates in the Digital Humanities, University of Minessota Press, Minnesota, pp. 490-509.
- [2] Losh, E, Wernimont, J, Wexler, L & Wu, HA 2016, Putting the human back into the digital humanities: Feminism, generosity, and mess', in Gold, M & Klein, L (eds.) Debates in the Digital Humanities, University of Minessota Press, Minnesota, pp. 92-103.
- [3] Earhart, AE, Risam, R & Bruno, M 2021, 'Citational politics: Quantifying the influence of gender on citation in Digital Scholarship in the Humanities', Digital Scholarship in the Humanities, vol. 36, no. 3, pp. 581-594.
- [4] Gao, J, Nyhan, J, Duke-Williams, O & Mahony, S 2022, 'Gender influences in Digital Humanities co-authorship networks', Journal of Documentation, vol 78, no 7, pp. 327-350.
- [5] Earhart, AE 2012. 'Can information be unfettered? Race and the new digital humanities canon', in Gold, M (ed.) Debates in the Digital Humanities, University of Minessota Press, Minnesota, pp. 309-18.
- [6] Gallon, K 2016, 'Making a case for the black digital humanities', in Gold, M & Klein, L (eds.) Debates in the Digital Humanities, University of Minessota Press, Minnesota, pp. 42-49.

- [7] Noble, SU 2019, 'Toward a Critical Black Digital Humanities', in Gold, M & Klein, L (eds.) Debates in the Digital Humanities, University of Minessota Press, Minnesota, pp. 27-35.
- [8] Gairola, RK 2022, 'Peering Beyond the Pink Tent', in Fiormonte, D, Chaudhuri, S & Ricaurte P (eds.) Global Debates in the Digital Humanities, University of Minessota Press, Minessota, pp. 36-54.
- [9] Losh, E & Wernimont, J 2019, Bodies of Information: Intersectional Feminism and the Digital Humanities, University of Minnesota Press, Minnesota.
- [10] Bordalejo, B & Risam, R 2019, Intersectionality in Digital Humanities, Arc Humanities Press, Leeds.
- [11] Risam, R 2018, 'Decolonizing the digital humanities in theory and practice', in Sayers, I (ed.) The Routledge Companion to Media Studies and Digital Humanities, Routledge, New York, pp. 78-86.
- [12] Gairola, RK 2020, 'New Digital Worlds: Postcolonial Digital Humanities in Theory, Praxis, and Pedagogy, written by Roopika Risam', Asiascape: Digital Asia, vol. 7, no. 1-2, pp. 149-152.
- [13] Sayers, J 2018, Making things and drawing boundaries: Experiments in the Digital Humanities, University of Minnesota Press, Minnesota.
- [14] Kirschenbaum, M 2014, 'What is "Digital Humanities," and why are they saying such terrible things about it?', Differences, vol. 25, no. 1, pp.46-63.
- [15] Nyamnjoh, FB 2017, 'Incompleteness and conviviality: A reflection on international research collaboration from African an perspective', in Y. Gebre, Y, Ohta, I & Matsuda M (eds.) African virtues in the pursuit of conviviality: Exploring local solutions in light of global prescriptions, Langaa RPCIG, Bamenda, pp. 339–378.
- [16] Estill, L, Terras, M, Ortega, E, Verhoeven, D & Layne-Worthey, G 2022, 'The circus we deserve? A front row look at the organization of the annual academic conference for the Digital Humanities', Digital Humanities Quarterly, vol. 16, no. 4.

- [17] Weingart, SB & Eichmann-Kalwara, N 2017, 'What's Under the Big Tent?: A Study of ADHO Conference Abstracts', Digital Studies/Le champ numérique, vol. 7, no. 6.
- [18] McGrail, AB, Nieves, AD & Senier, S 2022, People, Practice, Power: Digital Humanities outside the Center, University of Minnesota Press, Minnesota.
- [19] Gornall, A & Bhattacharyya, S 2022, 'Digital Humanities Inside Out: Developing a Digital Humanities Curriculum for Computer Scientists in Singapore', Digital Humanities Quarterly, vol.16, no.4.
- [20] Pink, S 2022, 'Methods for Researching Automated Futures', *Qualitative Inquiry*, vol.28, no. 7, pp. 747-753.
- [21] Malinowski B 1922, Argonauts of the Western Pacific, An Account of Native Enterprise and Adventure in the Archipelagoes of Melanesian New Guinea. G. Routledge & Sons, London.
- [22] Geertz, C 1973, The Interpretation of Cultures: Selected Essays, Basic Books, New York.
- [23] Mafeje, A 1998, 'Conversations and confrontations with my reviewers', African Sociological Review/Revue Africaine de Sociologie, vol. 2, no. 2, pp. 95-107.
- [24] Miller, D 2018, 'Digital anthropology', Cambridge Encyclopedia of Anthropology, viewed 15 May, http://doi.org/10.29164/18digital.
- [25] Mead, M 1968, 'Cybernetics of cybernetics', in Proceedings of the First Annual Symposium of the American Scoiety for Cybernetics, Spartan Books, New York.
- [26] Ingold, T 1997, 'Eight themes in the anthropology of technology', Social Analysis: The International Journal of Social and Cultural Practice, vol. 41, no. 1, pp. 106-138.
- [27] Nyamnjoh, F 2015, 'Beyond an evangelising public anthropology: science, theory and commitment', Journal of Contemporary African Studies, vol. 33, no. 1, pp. 48-63.
- [28] Benjamin, R 2019, Race after technology: Abolitionist tools for the new jim code, Polity Press, Cambridge.

- [29] Birhane, A 2020, 'Algorithmic Colonization of Africa', *Scripted*, vol. 17, no. 12, pp. 389-409.
- [30] Chun, W 2021, Discriminating Data: Correlation, Neighborhoods, and the New Politics of Recognition, MIT Press, Cambridge.
- [31] Crawford, K 2021, *The Atlas of AI*, University Press, Yale.
- [32] Eubanks, V 2018, Automating inequality: How high-tech tools profile, police, and punish the poor, St. Martin's Press, New York.
- [33] Lambrecht, A & Tucker, C 2019, 'Algorithmic bias? An empirical study of apparent gender-based discrimination in the display of STEM career ads.', *Management Science* vol. 65, no. 7, pp. 2966-2981.
- [34] Noble, S 2018, *Algorithms of oppression*, New York University Press, New York.
- [35] O'Neil, C 2016, Weapons of Math Destruction: How big data increases inequality and threatens democracy, Crown Books, New York.
- [36] York, J 2021, Silicon values: The future of free speech under surveillance capitalism, Verso Books, London.
- [37] Zuboff, S 2019, The age of surveillance capitalism: The fight for a human future at the new frontier of power, Profile books, London.
- [38] Ingold, T 2013, Making: Anthropology, archaeology, art and architecture, Routledge, London.
- [39] Kirschenbaum M 2016, 'What is digital humanities and what's it doing in English departments?', in Gold, M & Klein, L (eds.) *Defining Digital Humanities*, Routledge, London, pp. 211-220.
- [40] Knox, H 2018. 'Baseless data?: Modelling, ethnography and the challenge of the anthropocene', in Knox, H & Nafus, D (eds.) *Ethnography for a data-saturated world*, Manchester University Press, Manchester, pp. 128-150.