JOURNAL OF DIGITAL SOCIAL RESEARCH

THE INAUGURAL ISSUE
VOL. 1 : NO. 1 : 2019

CONCEPTUALISING DIGITAL SOCIAL RESEARCH

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JOURNAL OF DIGITAL SOCIAL RESEARCH

VOL. 1 : NO. 1 : 2019

JOURNAL METADATA

ISSN
2003–1998

DOI
http://doi.org/10.33621/jdsr

WEB
www.jdsr.io

ABOUT JDSR

JDSR is a cross-disciplinary, online, open-access journal, focussing on the interaction between digital technologies and society. JDSR is published by DIGSUM, the Center for Digital Social Research at Umeå University, Sweden.

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JOURNAL OF DIGITAL SOCIAL RESEARCH

WWW.JDSR.IO ISSN: 2003-1998

VOL. 1, NO. 1, 2019, 1–9

HACKING SOCIAL SCIENCE FOR THE AGE OF DATAFICATION

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ABSTRACT

The ongoing and intensifying datafication of our societies poses huge challenges as well as opportunities for social science to rethink core elements of its research enterprise. Prominently, there is a pressing need to move beyond the long-standing qualitative/quantitative divide. This paper is an argument towards developing a critical science of data, by bringing together the interpretive theoretical and ethical sensibilities of social science with the predictive and prognostic powers of data science and computational methods. I argue that the renegotiation of theories and research methods that must be made in order for them to be more relevant and useful, can be fruitfully understood through the metaphor of *hacking social science*: developing creative ways of exploiting existing tools in alternative and unexpected ways to solve problems

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The launch of the *Journal of Digital Social Research (JDSR)* happens in the midst of the age of datafication, which poses challenges and opportunities for social science to rethink itself in methodological, and other, terms. The broad proliferation of big data and data science risks that its one-sided data-drivenness spills over into scholarly social research, and that the skill and role of theoretical interpretation gets lost among bits, bytes and shiny infographics. JDSR can hopefully be a forum for discussions about how we can think and operate as theoretically sensitive and methodologically flexible social scientists in the age of datafication. There lies great scholarly potential in bringing data-driven computational approaches into closer contact with social theory, but only if such approaches are given a critical framing.

1 DATAFICATION

Sociologist Deborah Lupton (2014, p. 101) argues that the hype that surrounds the new technological possibilities afforded by big data analysis contributes to the belief that such data are "raw materials" for information — that they contain the untarnished truth about society and sociality. But as we know, in reality, each step of the process in the generation of big data relies on a number of human decisions relating to selection, judgement, interpretation, and action. Therefore, the data that we will have at hand are always configured via beliefs, values, and choices that "'cook' the data from the very beginning so that they are never in a 'raw' state". So, there is no such thing as raw data, even though the orderliness of neatly harvested and stored big data sets can create a mirage to the contrary.

Sociologist David Beer (2016, p. 149) argues that we now live in "a culture that is shaped and populated with numbers", where trust and interest in anything that cannot be quantified diminishes. Furthermore, in the age of big data, there is an obsession with causation. As Crawford and boyd (2012, p. 665) argue, the mirage and mythology of big data demand that a number of critical questions are raised with regards to "what all this data means, who gets access to what data, how data analysis is deployed, and to what ends". There is a risk that the lure of big data will sideline other forms of analysis, and that other methods with which to analyse the beliefs, choices, expressions, and strategies of people are pushed aside by the sheer volume of numbers.

All the things that people do online in the context of social media generate vast volumes of interesting data from the perspective of social science. Such data have been approached in highly data-driven ways within the field of data science — an interdisciplinary specialisation at the intersection of statistics and computer science, focusing on machine learning and other forms of algorithmic processing of large datasets to "liberate and create meaning from raw data" (Efron and Hastie 2016, p. 471). Data science projects tend to be strongly data-driven, often with the aim of getting a general picture of some particular social pattern or process. Being data-driven is not a bad thing, but there must always be a balance between data and theory – between information and its interpretation. This is where social theories

come into the picture, as they offer a wide range of conceptual frameworks that can aid in the analysis and understanding of the large amounts and many forms of social data that are proliferated in today's world.

But in those cases where we see Big Data being analysed, there is far too often a disconnect between the data and the theory. One explanation for this may be that the popularity and impact of data science makes its data-driven ethos spill over also into the academic fields that try to learn from it. This means that we risk forgetting about the theoretical analysis that may fade in the light of sparkling interactive visualisations.

But social research that relies heavily on the computational amassing and processing of data must still have a theoretical sensitivity to it. While pure data science methods are extremely helpful when wrangling the units of information, the meanings behind the messy social data which are generated in this age of datafication can be better untangled if we also make use of the rich interpretive toolkit provided by sociological theories. The data do not speak for themselves, even though some Big Data evangelists have claimed that to be the case (Anderson 2008).

Big Data and data science are partly technological phenomena, which are about using computing power and algorithms to collect and analyse comparatively large datasets of largely unstructured information. But prominently they are also a cultural phenomenon that comes with a mythological belief that huge unstructured datasets, often based on social media interactions and other digital traces left by people, when paired with methods like machine learning and natural language processing, can offer a higher form of truth which can be computationally distilled rather than interpretively achieved.

Such mythological beliefs are not new however, as there has long been, if not a hierarchy, so at least a strict division of research methods within the cultural and social sciences, where some methods – those that have come to be labelled "quantitative", and that include survey methods analysed with statistical tools – have been vested with an "aura of truth, objectivity, and accuracy" (boyd and Crawford 2012, p. 663). Other methods – those commonly named "qualitative", and involving so-called close-readings of textual data from interviews, observations and documents – are seen as more interpretive and subjective. This distinction is not only annoying, but also wrong. We can get at approximations of "the truth" by analysing social and cultural patterns, and those analyses are by definition interpretive no matter the chosen methodological strategy. Especially in this day and age where data, the bigger the better, are fetishised it is high time to move on from the unproductive dichotomy of qualitative versus quantitative.

2 DATA-DRIVEN

As argued above, pure data science is most of the time too data-driven from the perspective of social science. It tends very strongly to focus simply on what is

researchable. It goes for the issues for which there is data, no matter if those issues have any real-life urgency or not. The last decade has seen parts of the field of data science and parts of the social sciences become entangled in ways that risk a loss of theoretical grounding. In a seminal paper outlining the emerging discipline of "computational social science", David Lazer and colleagues wrote that:

> We live life in the network. We check our e-mails regularly, make mobile phone calls from almost any location, swipe transit cards to use public transportation, and make purchases with credit cards. Our movements in public places may be captured by video cameras, and our medical records stored as digital files. We may post blog entries accessible to anyone, or maintain friendships through online social networks. Each of these transactions leaves digital traces that can be compiled into comprehensive pictures of both individual and group behavior, with the potential to transform our understanding of our lives, organizations, and societies (Lazer et al. 2009, p. 721 , emphasis added)

Furthermore, they argued that there was an inherent risk to the fact that existing social theories were "built mostly on a foundation of one-time 'snapshot' data" and that they therefore may not be fit to explain the "qualitatively new perspectives" on human behaviour offered by the "vast, emerging data sets on how people interact" (Lazer et al. 2009, p. 723). While I agree that social analysis must be re-thought in light of these developments, I am not so sure that it is simply about "compiling" the data, and then being prepared that existing theories may no longer work. Rather, I argue, we should trust a bit more that even though the size and dynamics of the data may be previously unseen, the social patterns that they can lay bare – if adequately analysed – can still largely be interpreted with the help of "old" theories. After all, the theories are not designed to understand particular forms of data, but instead the sociality that they bear witness to. My point is that social theory is needed for considering both the data, the methods, the ethics, and the results of the research. By extension, still, theories may always need to be updated, revised, or even discarded — but that has always been true.

Noortje Marres and Caroline Gerlitz (2016) suggest that we should go beyond previous divisions of methods by thinking in terms of "interface methods". This means highlighting that digital methods are dynamic and under-determined, and that multiple methodologies are intersecting in digital research. By recognising "the unstable identity of digital social research techniques", we can "activate our methodological imagination" (Marres 2017, p. 106). Marres continues to say that:

> Rather than seeing the instability of digital data instruments and practices primarily as a methodological deficiency, i.e. as a threat to the robustness of sociological data, methods and findings, the dynamic nature of digital social life may also be understood as an enabling condition for social enquiry (Marres 2017, p. 107).

I would like to advocate for a general stance by which more integrated methodologies can be developed and propagated. In important respects, the data-drivenness of big data science is not different from the data-drivenness of ethnography and anthropology. There is a need to formulate approaches by which

theoretical interpretation and a "qualitative" approach to data is integrated with "quantitative" analysis and data science techniques. As a sociologist, I am particularly interested in what interpretive sociology can bring to the table here. With this concept I refer to the classic notion of sociology as "a science concerning itself with the interpretive understanding of social action (…) its course and consequences" (Weber 1922/1978, p. 4). This kind of sociology is about the understanding (Verstehen) of social life and has a focus on processes of how meaning is created through social activities. In other words, it is not a positivist and objectivist science. As Max Weber put it, "Meaning" never refers:

> to an objectively "correct" meaning or one which is "true" in some metaphysical sense. It is this which distinguishes the empirical sciences of action, such as sociology and history, from the dogmatic disciplines in that area (…) which seek to ascertain the "true" and "valid" meanings associated with the objects of their investigation (Weber 1922/1978, p. 4).

Still, he continued, interpretive sociology "like all scientific observations, strives for clarity and verifiable accuracy of insight and comprehension (Evidenz)" (Weber 1922/1978, p. 4). The interpretive stance should entail moving back and forth between such evidence – data – and their iterative and cumulative interpretation – theory. It is important that that we remind ourselves that also (or maybe especially) in the age of datafication, data (still) needs theory, and theory (still) needs data. One vision for JDSR is that it can enable discussions about how we can conceptualise and do research that aligns with that insight.

3 DATA/THEORY

Social theories, and often such theories that were developed more than a hundred years ago, can in fact contribute immensely to our understanding of things that we are now in the process of, maybe unnecessarily, inventing new names for: "viral communication", "user-generated content", "the blogosphere", "online hate", "cyber bullying", and so on. I do not mean that such words, at least not all of them, are merely superfluous synonyms for things that we already had adequate names for. Nor do I claim that any old theory is always better than a new one, or that such old theories can be applied unproblematically to 21st century phenomena without modification. But in many cases, we run the infamous risk of throwing the baby out with the bath water. When researching the peculiarities and novelties of interaction and communication in the datafied society, we risk mistaking theories about general patterns of social life for being obsolete just because they were developed in non-digital contexts.

The already established theories are useful because even though settings change, we may oftentimes be dealing with the same underlying social forms as before. Georg Simmel (1895, p. 54) argued that the most important task for the sociologist is to separate the form and content of social life, which are in reality inseparably united. The aim of the analysis must be to detach the forms from their

contents and to bring them together systematically: "For it is evident that the same form (…) can arise in connection with the most varied elements". Simmel continued to explain that:

> We find, for example, the same forms of authority and subordination, of competition, imitation, opposition, division of labor, in social groups which are the most different possible (Simmel 1895, p. 55).

Data scientists Rachel Schutt and Cathy O'Neil (2013, p. 9) argue that data scientists have much to benefit from collaborating with social scientists. This, they write, is because social scientists "do tend to be good question askers and have other good investigative qualities". They write about the hyped and still emerging speciality of data science that "it's not math people ruling the word". Rather, they argue that when different "domain practices", such as sociology, intersect with data science, each such practice is "learning differently" (Schutt and O'Neil 2013, p. 219). Taking my cue from Schutt and O'Neil, I would like to ask what type of such different learning – which methodological developments – can follow when social science meets data science.

This is obviously a vastly open question with a multitude of potential answers. Therefore, my suggestion, which draws to a great extent on my personal methodological and theoretical preferences as an interpretive sociologist, is but one possibility. The main idea that I am pushing is that the data-drivenness of interpretive sociology, as formulated as a hands-on framework by methodologists such as Glaser and Strauss (1967), and particularly Glaser's (1978) notion of theoretical sensitivity, can be dusted off and fruitfully brought together with the data-drivenness of data science practices.

Many would say that the respective general views on science and methodology between big data and grounded theory research are too divergent, to the point that they are even incompatible. I do not believe that to be the case. Still, experimentally merging methods that are labelled "qualitative" and "quantitative" is not a good idea if you want everyone to agree with you. In both camps (because sadly, that is still what they are), it is equally easy to find people who are dogmatic. So, to find productive ways across, there is definitely a need to think outside the box.

There are new types of data today, that demand new types of methods, while there are also new types of research questions arising that call for developing new approaches. This demands for advancing our perspective on both theory and methods in parallel. In other words, developing a data/theory approach.

4 HACKING SOCIAL SCIENCE

In light of the developments towards a datafication of society, there is a need to hack theories and research methods in order to make them more relevant and useful. Hacking is a fitting metaphor for the creative and somewhat anarchistic approach to existing theories and methods that I want to advocate, as it points to the idea that finding good solutions – rather than adhering to rules – should be the

end goal of any analytical strategy. This draws on Feyerabend's idea that anarchism in science, rather than "law-and-order science", is what will help achieve progress. And, as for the risk that such an approach will lead to an unproductive situation where anything goes, we must simply trust in our own ability to think in structured ways even without following rigid rules dogmatically:

> There is no need to fear that the diminished concern for law and order in science and society that characterizes an anarchism of this kind will lead to chaos. The human nervous system is too well organized for that (Feyerabend 1975, p. 13).

In spite of its popular reputation to the contrary, hacking is not (only) about breaking the law through forms of electronic vandalism. As argued by cryptologist Jon Erickson (2008), hacking can in fact be more about adhering to rules than about breaking them. Its goal, however, is to come up with ways of using, or exploiting, the structures and resources that are in operation in any given situation in ways that may be overlooked or unintended. Hacking is about applying existing tools in smart and innovative ways to solve problems. Erickson writes that:

> hacked solutions follow the rules of the system, but they use those rules in counterintuitive ways. This gives hackers their edge, allowing them to solve problems in ways unimaginable for those confined to conventional thinking and methodologies (Erickson 2008, p. 16).

The same can go for research, where we must allow ourselves to not think so much about which theoretical perspectives have been conventionally agreed to be compatible with one another, or about whether certain methods can be mixed together or not. A common conviction is that one cannot do "qualitative" and "quantitative" in the same breath, as they are based on different epistemologies. But this can in fact be debated. As argued by Bryman (1984), the difference may in practice not lie so much in different philosophical views on how knowledge about social reality is achieved, but simply in the path-dependent choices that are made by individual researchers who get stuck with one paradigm or the other. While it has become an eternal truth, reiterated by researchers and methods teachers alike, that "the problem under investigation properly dictates the methods of investigation" (Trow 1957, p. 33), very few of us adhere to this in practice.

But datafication presents us with a new data environment – with data traces, data fragments, and unsolicited data – that offers the opportunity to think in new ways about research in the "spirit of hacking", aiming to surmount "conventional boundaries and restrictions" for the goal of "better understanding the world" (Erickson 2008, pp. 16–18). What I describe here as anarchistic, and as hacking, may sound radical and dangerous – or maybe just plain stupid. But as a matter of fact, this approach is not very far from how science, as conceived by Bruno Latour, in general comes into being. Science and research happen in action. It is not ready-made. Interest should not be focused on any alleged intrinsic qualities of approaches, but at the transformations that they undergo in their practical use. Methods do not have any "special qualities", as their effects come from the many

ways through which they are "gathered, combined, tied together, and sent back" (Latour 1987, p. 258). Thus, "we are never confronted with science, technology and society, but with a gamut of weaker and stronger associations" (Latour 1987, p. 259). Knowledge about society is produced through more or less messy sets of practical contingencies.

The obvious connection between social science and computational methods may be through social science's quantitative specialisations, but there is much to gain from bringing data science methods in contact with the, maybe less expected, qualitative framework. The data-drivenness of data science can be more fruitfully construed as a form of digital fieldwork, rather than in terms of positivistic hypothesis testing.

In sum, hacking social science is first about *social science hacking*. That is, "qualitative" social scientists daring to play around with computational methods and techniques, more as participant observers than as faux computer scientists, second-rate statisticians, or bad mathematicians. This means engaging in a form of hacking, finding unexpected and creative solutions, but still as social researchers. Second, it is about *hacking social science*, that is, moving social research into new domains without fear of it losing its identity. In fact, many of today's computational opportunities may bring us closer than ever to realising the vision of the classic sociologists who wanted to study social processes in terms of systems, and often on a macro-level.

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JOURNAL OF DIGITAL SOCIAL RESEARCH

WWW.JDSR.IO ISSN: 2003-1998

VOL. 1, NO. 1, 2019, 10–16

WHAT IS CRITICAL DIGITAL SOCIAL RESEARCH? FIVE REFLECTIONS ON THE STUDY OF DIGITAL SOCIETY

Christian Fuchs*

ABSTRACT

The creation of the Journal of Digital Social Research (JDSR) is an opportunity to ask: What is critical digital social research? What is the status of digital social research today? The contribution points out five reflections on the status of digital social research. These five observations focus on 1) diamond open access, 2) the theme of digital media & society, 3) critical digital methods, 4) critical digital theory & philosophy, 5) international and global digital research. These five dimensions form important foundations of critical digital social research.

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The creation of the Journal of Digital Social Research (JDSR) is an opportunity to ask: What is critical digital social research? What is the status of digital social research today? In this short reflection piece, I am not able to provide sufficient and detailed answers, but can rather only point out what I consider to be some of the important issues (see also Fuchs 2017 for a recent, more extended provocation, as well as Fuchs and Qiu 2018). The contribution points out five reflections on the status of digital social research.

Reflection 1: We Need Diamond Open Access

My *first* observation is about JDSR's use of an online publishing platform: It is an open access journal and thereby part of a growing number of such journal and publishing venues in communication studies, the social sciences and humanities.[1] There are competing models of journal publishing: First, there is the traditional mainstream model that charges for access and has come under criticism for monopoly profits and its inherent access limitations. Second, there are for-profit open access models that charge high article and book processing charges (APCs, BPCs). Inequality is thereby just shifted from the readers to the authors. If you are an Oxbridge scholar or part of a similar, rich, class-structured university, then your institution may pay the publishing fee because it is rich. But poor institutions, for example in developing countries, are excluded.

The third model is the one of diamond open access (Fuchs and Sandoval 2013): It is a non-profit model that does not aim at accumulating capital and yielding profit from online publishing, but is solely designed to serve a community of scholars with a not-for-profit imperative. JDSR is such a journal. The non-commercial Creative Commons CC-BY-NC-ND licence excellently supports such journals. I have myself since 2003 edited a diamond open access communication studies journal (tripleC: Communication, Capitalism & Society, http://www.triple-c.at) that uses the same model. It has over the years turned into a journal for Marxian studies of society and communication. When an open access journal becomes more popular, which normally takes quite some years, the number of submissions and published articles grows. The challenge for alternative models (and alternative media in general) is how to sustain resources that fund the key publishing work of copy-editing, layout, design, html- and pdf-generation and allows publishing workers to earn a living as designers, proof-readers, etc. What I'd like to see in this respect are more collective funding models (public funding, open access funds, funding efforts such as Knowledge Unlatched, etc.)

Reflection 2: The Study of Digital Media & Society is not a Field or (In-, Inter-, Multi-, Trans-)Discipline, but a Theme of Research

[1] See Directory of Open Access Journals, available at: https://doaj.org/, Directory of Open Access Books, available at: https://www.doabooks.org/

The *second* observation focuses on the study of digital media in society. "Digital media and society" is a topic of research, not a new field, discipline, interdiscipline, multidiscipline, transdiscipline, or indiscipline. There is an unfortunate tendency in academia that scholars and groups of scholars are fond of postulating the creation of radically new interdisciplinary fields: social informatics, science and technology studies (STS), surveillance studies, information society studies, digital media studies, big data research, Internet research, digital humanities, social media studies, computational social science, etc. are just some of them. The problem is that such self-labelled new interdisciplinary fields often simply behave like old disciplines and do not do academia differently, but rather reproduce and recreate the same old power structures typical for bourgeois science in a bourgeois society. The result is a fragmentation of the academic world into ever more specialised sub-fields and sub-disciplines – a diversity without unity, although we need more unity in diversity.

In a fragmented academic landscape, scholars are so specialised that they often cannot properly talk to each other about research beyond the niche confines of single issues and do not have the proper foundations needed for engaging in collaborations that focus on larger-scale themes. Specialisation threatens to kill the focus on unity in diversity, generalism and universalist thinking needed for challenging the big problems society faces today.

The basic onto-epistemological and axiological distinction that still holds true in academia today and that can also be observed in the study of digital media is the one between traditional and critical research. I personally consider myself primarily a critical researcher and critical theorist and find labels such as "Internet research", "surveillance studies", "new media research", etc. unhelpful distractions from the questions that really matter. The study of digital media in society is a topic for critical studies, not a field or discipline.

Reflection 3: Critical Digital Methods

My *third* observation is about digital methods. Digital media have to a certain degree transformed the methods used in the social sciences and humanities. This does not mean that traditional methods have become outdated, although many make the exaggerated claim they have, but that the repertoire of social research methods has grown. But there are power structures that shape the use of digital methods. A new digital positivism has emerged that forms the mainstream of digital methods and indeed shapes the whole field of digital media studies (Fuchs 2017). The mainstream of digital methods is based on big data research methods and computational social science. It is a paradigm that is about quantification, mathematics, and calculation. Such approaches set out to explain the world based on the analysis of big stocks and flows of data. The problem is that the analysis of big data does not tell us everything that matters. It cannot properly study human

motivations, feelings, experiences, norms, morals, values, interpretations, concerns, fears, hopes, etc.

Digital positivism poses the danger that computer science colonises the social sciences and humanities and that computing substitutes for the practice of interpretative methods, critical theory, philosophy and ethics. If you have to learn coding for becoming a social scientist, then undergraduate and postgraduate degrees will turn into computer science degrees and there will not be enough time for the time-consuming, important activities of doing critical theory, which entails reading and writing theory books and essays, engaging with normative questions and moral philosophy, the deconstruction of ideologies, creating qualitative alternatives, connecting research to social struggles, etc.

I am not saying that digital methods do not matter or that they should not be used and developed. I am rather arguing for the development and use of alternative, critical digital methods that are more qualitative than quantitative, are combined with traditional, use small datasets instead of big datasets, are critical theory-based, creative, experimental, participatory, investigate power structures and aim at contributing to the creation of a commons-based society. The logic of the business school has colonised universities, commodifying higher education. If the logic of the computing school is added to the logic of the business school, then this results in a mixture that calls for digital research for businesses instead of critical research about digital society. Often, such a business-oriented agenda hides itself under the catchword of "interdisciplinarity". What is normally meant is: "Social scientists and humanities researchers, you should work for helping businesses to make digital innovations they can sell for profit. Work together with and for the Googles, Microsofts, Apples and other capitalists of this world". Research funding agencies have swiftly followed this agenda and under the umbrella of innovations in digital methods channel significant amounts of funding towards the digital positivists.

Reflection 4: Critical Digital Theory & Philosophy

The *fourth* observation concerns the role of theory and ethics in the study of the digital. The former editor of the neoliberal digital tech magazine Wired Chris Anderson (2008) claims that big data analytics makes theory development unnecessary and results in the end and death of theory. Digital positivists are indeed hardly experts in social theory and in political, social and moral philosophy. They have no use for such approaches. In their writings, "theory" reduces itself to (mostly bad) definitions of some key concepts. The problem is that the entire agenda of big data analytics is failed because it does not ask the right critical questions that matter for creating a good society.

Digital positivism is an expression of bourgeois scientific consciousness. It does not realise that there is a world outside of data. If we want to study digital society, we need to not just understand the logic of data, but also how humans experience data and digital society. Theory and philosophy have an important role

to play in this context because they can help us to systematically approach the big questions and changes that society has been undergoing.

In digital positivism, the role of ethics is mostly reduced to research ethics in the context of the use of digital methods. Terms such as digital media ethics, Internet research ethics, social media research ethics, etc. are used in this context. There are of course important research ethical questions that need to be posed. They have to do with blurring boundary between the private and the public sphere, informed consent, data protection, etc. But ethics has a larger role to play too: It is a means for asking questions about how a good information society and a good Internet should look like and for discussing answers. For doing so, we need engagement with a broad range of ethical approaches, including Marxist and critical ethics, virtue ethics, deontological ethics, consequentialist ethics, feminist ethics, environmental ethics, non-Western versions of ethics, etc. Digital positivism normally has no use for such a version of ethics because its researchers tend not to ask big, critical questions about society, power structures, and the normative foundations of communication and society.

A typical example of the instrumentalisation of ethics are funding schemes that have introduced a mandatory ethical assessment. Often, projects developing highly unethical technologies used for killing, monitoring, or controlling people are looking for the "ethics experts" who join consortia, get some peanuts, whereas the major funds go to those conducting morally highly problematic research, and are instrumentalised for rubberstamping morally questionable research as being "ethically sound". There is a lack of funding for research and projects that are genuinely and fully focused on the ethical and critical dimensions of new technologies.

Digital media studies should give more attention to the systematic, critical application of social theories and ethics. Doing so is part of challenging digital positivism and practicing digital media studies as critical digital research.

Reflection 5: International and Global Digital Research

The *fifth* observation is about the international and global dimension of digital research. Digital networks enable international and global communication. Although there are today certain de-globalisation tendencies, society, the economy, politics and culture have a highly international character. But the majority of "global" studies of digital media in society ask small-scale questions about single phenomena in single contexts in single, non-Western countries. Under the catchwords of "de-Westernising", "non-Western" and "postcolonial" research, a new form of particularism has emerged in research that has methodological nationalism at its core. A methodological nationalist digital study typically focuses on one digital phenomenon in one context within one country. Usually the scope is the country, from where the scholar or PhD student conducting the study comes.

Society is a global, interconnected, complex world system. We need a true form of internationalism in research, not the substitution of "Western-centrism" by methodological nationalism. We need more internationally comparative studies that focus on the big questions and problems that humans face in the world system's economy, politics and culture. There is a range of global problems that concern humans in many parts of the world and that form important contexts for communication, culture, the media, creative labour and the digital. We need to go from methodological nationalist digital social research towards critical, methodological internationalist digital social research.

Funding agencies typically focus on methodological nationalism and methodological regionalism and do not encourage international and global collaboration that includes scholars from developing countries on equal academic and financial grounds. There are main challenges for establishing truly international and global studies.

Critical Digital Social Research

Taken together, the implications these five observations form dimensions of the foundations of the version of digital social research that I feel passionate about. Critical digital social research practices and experiments with new forms of critical publishing, focuses on the digital as theme of critical theory and critical research and not as field or discipline, asks big questions that matter for the creation of the good information society that overcomes the global problems humanity faces today, develops and uses critical digital methods that interact with traditional methods, develops and applies critical theories and political, social and moral philosophy, and is methodologically internationalist.

Critical digital social research challenges the hegemony of digital positivism and instrumental digital reason. What we need today, is not the repetition of the multiplication of *New Media & Society*, which has resulted in the flourishing of particularistic journals such as *Big Data & Society*, *Social Media + Society*, etc. We rather need new versions of the *Journal for Social Research* (published as *Zeitschrift für Sozialforschung* in the years 1933-1938 and under the title *Studies in Philosophy and Social Science* in the years 1939-1942) in the age of digital capitalism and global communication.

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JOURNAL OF DIGITAL SOCIAL RESEARCH

WWW.JDSR.IO ISSN: 2003-1998

VOL. 1, NO. 1, 2019, 17–24

IN SEARCH OF MEANING: WHY WE STILL DON'T KNOW WHAT DIGITAL DATA REPRESENT

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ABSTRACT

In the early years, researchers greeted the internet and digital data with almost wide-eyed wonder and excitement. The opportunities provided by digital media such as websites, bulletin boards, and blogs—and later by social media platforms and mobile apps—seemed nearly endless, and researchers were suddenly awash in data. The bounty was so great that it required new methods for processing, organizing, and analysis. Yet in all the excitement, it seems that the digital research community largely lost sight of something fundamental: a sense of what all these data actually represent. In this essay, I argue that moving forward, researchers need to take a critical look into, be more open about, and develop better approaches for drawing inferences and larger meaning from digital data. I suggest that we need to more closely interrogate what these data represent in at least two senses: statistical and contextual. In the former instance I call for much greater modesty in digital social research. In the latter, I call for heuristic models that permit bolder, more robust comparisons throughout our work.

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In the early years, researchers greeted the internet and digital data with almost wide-eyed wonder and excitement. The opportunities provided by digital media such as websites, bulletin boards, and blogs—and later by social media platforms and mobile apps—seemed nearly endless. Available across geographical distances and, in many instances, not bound by time, it was possible to observe and explore human expression, behavior, connections, and interactions in both new and old forms. And researchers were suddenly awash in data. Indeed, the bounty was so great that it required new methods for processing, organizing, and analyzing the information at hand. "Big data" became the new buzz, with expressions of hope and enthusiasm about all the insights to be gained from its sheer abundance.

Yet in all the excitement, it seems that the digital research community largely lost sight of something fundamental: a sense of what all these data actually represent. In this essay, I argue that moving forward, researchers need to take a critical look into, be more open about, and develop better approaches for drawing inferences and larger meaning from digital data. I suggest that we need to more closely interrogate what these data represent in at least two senses: statistical and contextual.

1 STATISTICAL REPRESENTATIVENESS – CAN WE DRAW UNBIASED INFERENCES FROM OUR SAMPLES?

In statistical terms, we must do a better job of assessing how representative our datasets are of the larger population from which they are drawn. Digital social research often relies on convenience sampling, including when collecting data via platforms' application programming interfaces (APIs). Yet we rarely acknowledge this fact. And we are even less likely to carefully assess the potential implications for our findings.

To illustrate the problem at hand, consider the vast body of research focused on Twitter. Digital researchers have long flocked to this platform. Web of Science identifies 7,343 studies published during the last five years that list "Twitter" as a main topic, and a Google Scholar search for the term "Twitter data" returns more than 6,200 results for 2018 alone. Research on Twitter is so ubiquitous because of the ease of data access. Unlike Facebook, where much of the content is private, the vast majority of tweets are public. And unlike more public spaces such as Instagram and reddit, Twitter offers APIs that provide access to tremendous numbers of posts and their metadata free of charge. Twitter's Streaming API provides access to public tweets in real time, while the Search API provides access to historical tweets.

However, each API carries significant limitations. If a researcher is interested in capturing tweets that match certain keywords, the Search API will only return posts generated within roughly the last week. And according to Twitter's own documentation, the Search API returns tweets based on "relevance," not

"completeness."[1] In other words, the API returns a non-random sample of the full data. The Streaming API, on the other hand, will return the complete population of data matching a keyword query, but only if the matched tweets do not constitute more than 1% of the global volume of tweets at any given moment in time. In other words, the more a keyword is (or set of keywords are) tweeted *or* the fewer tweets are being generated overall (e.g., during major holidays), the more likely one is to get incomplete data. When rate limits are imposed on the Streaming API, the data are truncated. Any tweets above the 1% threshold are simply withheld (Tromble, Storz and Stockmann 2017).

Thus, keyword queries to the Search API virtually ensure non-random data sets, while high-volume captures via the Streaming API are also likely to generate non-random samples. Unfortunately, this means that a great deal of Twitter research is based on statistically biased inferences that in turn undermine conclusions drawn about the social behaviors and relationships under investigation (Tromble, Storz and Stockmann 2017).

One of the only ways to effectively solve this problem for keyword based Twitter research is to purchase the required data. This is not only cost prohibitive, but the solution only applies to data captured in real time. Data purchased from Twitter's historical archive are incomplete; any tweets that have been subsequently deleted or set to private are removed from the archive, and such longitudinal data decay is also non-random (Tromble and Stockmann 2017).

The problem of statistical representativeness is not unique to Twitter. Among platforms that still maintain public APIs, data collection is typically limited to a relatively small number of recent posts or content. Reddit, for instance, permits the capture of just 1,000 posts from a given subreddit. Nor is the problem unique to social media platforms, per se. One common source of digital social research data, the Internet Archive's Wayback Machine, does not contain orphan pages (i.e., those to which no other page links), and websites that include a robot exclusion standard (robots.txt) were long exempted from its crawls.[2]

Of course, not all research will be impacted by such limitations. Projects that collect real-time Twitter data continuously over long periods of time can alleviate the concerns about non-random samples. So too for long-term data collection via reddit's API. And research examining specific websites that have been fully captured by the Wayback Machine will be on firmer ground. But for short-term, snapshot studies that seek some degree of generalizability—whether across websites, platforms, or even *within* a given platform itself—the concerns are substantial. Without better indications of whether and how such data systematically

1 Twitter (nd). Search Tweets, https://developer.twitter.com/en/docs/tweets/search/overview/standard.html, (accessed 11 April 2019).

2 Internet Archive. (nd). Using the Wayback Machine, https://help.archive.org/hc/en-us/articles/360004651732-Using-The-Wayback-Machine (accessed April 11, 2019).

differ from the relevant population, it is difficult to say in statistical terms what our data represent.

2 CONTEXTUAL REPRESENTATIVENESS – WHAT IS THIS AN INSTANCE OF?

In broader contextual terms, digital social research has yet to offer a clear and standard set of heuristics that would facilitate our understanding of how digital data from one platform or space relate to data from another. Though comparative research is increasing (e.g., Boczkowski, Matassi and Michelstein 2018; Bossetta 2018; Rossini et al 2018), studies still tend to be single-platform. In most cases, single-platform studies draw carefully limited conclusions, providing, for example, an analysis of self-presentation on Instagram (Smith and Sanderson 2015) or an exploration of sexualized communication on Snapchat (Charteris and Gregory 2018). In other instances, however, the conclusions are broad and sweeping, suggesting, for example, that we might learn about the impacts of disagreement on social media writ large based on data exclusively from Twitter (Bail et al 2018). In the absence of carefully developed heuristic models or typologies, both approaches miss crucial relationships, context, and, therefore, meaning in the data. In other words, without a better understanding of how data drawn from one digital context relate and compare to data drawn from others, we cannot confidently say what our data are *instances of*.

Consider that vast body of Twitter research again. We turn to Twitter to examine phenomena as disparate as political polarization (Conover et al 2011; Garimella and Weber 2017; Yardi and Boyd 2010), private disclosure (Jin 2013; Walton and Rice 2013), and self-harm (O'Dea et al 2015). But what does it mean in broader terms when we find that political discourse on Twitter is polarized or that it is possible to detect suicide risk factors on the platform? Twitter has relatively few users. In February 2019, the company reported just 126 million daily active users (Twitter 2019) (compared to 1.5 billion for Facebook[3] and 186 million on Snapchat[4]), and users from the United States, who make up the bulk of Twitter engagement, are not representative of the American population in general (Barberá and Rivera 2014). Twitter also has a particular structure and set of design features that shape and constrain communication and social interactions in ways unlike any other social media platform (Bossetta 2018)—let alone the broader digital ecosystem. The variation in such affordances across platforms means that even when actions appear broadly similar—for example, "liking" a post on Twitter vs. Facebook—they may convey very different meanings (Bucher and Helmond 2018). What does political polarization or private disclosure on Twitter tell us about

3 Statista, https://www.statista.com/statistics/346167/facebook-global-dau/ (accessed April 11, 2019).
4 Statista, https://www.statista.com/statistics/545967/snapchat-app-dau/ (accessed April 11, 2019).

political polarization or private disclosure more broadly? Is the answer simply "nothing"?

I do not believe so. However, if we want to make more substantial gains in our understanding of digital social phenomena, we will need to develop—and consistently draw upon—heuristic typologies and models that provide logical guides for comparison and generalization across digital spaces. Such heuristics are incredibly common in other fields. In political science single-country case studies, as well as comparative analyses, are typically guided by foundational typologies that delineate levels and types of democracy (Jaggers and Gurr 1995) or various forms of electoral and party system design (Lijphart 2012). In mass media studies, research is frequently rooted in the typology of "media systems" developed by Hallin and Mancini (2004). These heuristics provide theoretical purchase. We might, for example, expect individual politicians to be more active on social media in majoritarian electoral systems where people directly elect their representatives, as compared to proportional electoral systems where voters select a party, not a specific politician (Tromble 2018). Such heuristic models also strengthen conclusions about the generalizability of our findings. If research finds that individual politicians are more active on social media in one majoritarian electoral system, there is a stronger case for suggesting it likely to be true in others. And a follow-up empirical analysis might directly test this expectation, bolstering cumulative knowledge.

Bossetta's (2018) work on the "digital architectures" of social media offers a potentially valuable starting point for digital social research. Breaking these architectures into four components—network structure, functionality, algorithmic filtering, and datafication—Bossetta demonstrates how these features shape and constrain political campaign communication across Facebook, Twitter, Instagram, and Snapchat in the United States. Such typologies can and should be further developed to include the wide range of digital spaces, not just social media platforms. Architectural features offer one option, but heuristic models can also be rooted in other characteristics of a digital space, including forms of communication (e.g., style, affect, linguistic features) or types of expression (e.g., performative, political). Existing comparative studies naturally draw upon many of these elements already, but without wider-scale and systematic heuristic models, the elements remain disparately engaged, and the larger body of digital social research continues to be disjointed.

3 CONCLUSION

Digital social research is at a crossroads. The heady days of data largess are mostly behind us. Scholars across fields and from different epistemological perspectives seem more willing to acknowledge the limitations we face in our research. My hope is that researchers will take this moment to expand critical reflections and (re)consider how we interpret and derive meaning from digital data.

I have only touched on two forms of data representativeness, statistical and contextual. There are certainly others. But these are important. From a statistical perspective, digital data are rarely perfectly representative. Indeed, given the near impossibility of breaking through proprietary black boxes to examine what data are even available—what in fact *constitutes* the population we might be interested in—demanding such perfection would be pedantic. However, we must be more transparent about the limitations of our data and more cautious in our findings and claims. Here the call is for more modesty. My hope for contextual representativeness, on the other hand, is for greater boldness. Appropriately grounded boldness. But boldness nonetheless. By taking a step back, applying a broader view to the digital landscape as a whole, and developing systematic heuristic models that apply across the ecosystem, digital social researchers will be able to make stronger, more robust claims based on specific empirical data—leading ultimately to a better understanding of what our data represent.

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JOURNAL OF DIGITAL SOCIAL RESEARCH

WWW.JDSR.IO ISSN: 2003-1998

VOL. 1, NO. 1, 2019, 25–30

DOING DIGITAL SOCIAL (AND CULTURAL AND MEDIA) RESEARCH: WHAT STAYS THE SAME WHEN EVERYTHING CHANGES?

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ABSTRACT

Research into digital sociality often encounters, both in academic and non-academic contexts, the claim that there is no point doing such research because the technologies being examined change so fast that analysis can never keep up. This article criticises any such claim. First, the article examines three kinds of 'sameness' that span the introduction of different technologies: internet-based text communication, digital platforms and information as a non-rival good. In each of these contexts this article explores how looking at what changes rapidly draws attention from forms of social power that stay the same across technologies. This article then argues from this examination that it is key to examine both differences and sameness when researching digital sociality.

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The internet, the world-wide web, Web 2.0, the semantic web, the end of the web, 2G, 3G, 4G, 5G unix, linux, hurd, Gnu, SQL, C++, Perl, Python, Visual Basic, Java, Javascript, Scratch, Groovy, Ruby on the Rails, Go, Powershell, R, AOL, email, IRC, MSN Messenger, Windows Live Messenger, Facebook Messenger, WhatsApp, Wechat, Apps, Apis, Friendster, Myspace, Facebook, Snapchat, Instagram, Napster, Kazaa, Bittorrent, iTunes, Spotify, Tide, Altavista, AskJeeves, Yahoo, Google, Bing, Duckduckgo, Baidu, Motorola Dynatac, Nokia E71, Nokia 8110, iPhone, Samsung Galaxy, Pixel, Apple, Symbian, Palm, Windows CE, Blackberry, Android: and I could go on.

It has been a time of rapid change in our technological landscape, particularly as devices become more connected, more intimate and more mobile and there is a weird poetry in remembering some of the last forty years of development in digital and internet socio-technologies by recounting names. A discipline of social research into such change has emerged at the same time, for example at a recent symposium I heard someone talking about how media studies had gotten their understandings badly wrong about information infrastructures, and they began with the period 2010-11 which is about fifteen years after scholarly work on digital media had begun. Research methods have developed during this time, for example I sometimes tell my students about doing my PhD using card catalogues to find books in the library and waiting for long periods for inter-library loans to be delivered always in hard copy (then I remember it is not much help turning into the Statler and Waldorf of digital studies). Rapid change, named often by technologies while being carried into mixed cultures and socialities, is one of the challenges of doing digital social (and cultural) research.

Rapid change is also the basis of a challenge I have often heard laid down to digital social researchers by friends and technology professionals—both government and corporate—who say regularly words to the effect: 'this technology will change before you can understand it, so there's no point trying to understand it, you just have to use it.' This claim can also be seen when governments identify successively changing priorities for research based on changing technologies (was it so long ago—in the UK—that big data was the focus and how long till AI is no longer the focus as it was in 2018 UK?). Amid such pressure not to think about what stays the same when the digital is part of change, I argue that social and cultural research about the digital needs to interrogate this claim about rapid change. This can be seen by giving some examples of how focus on change means potentially missing cultural and social continuities.

In the late 1980s across a number of psychologically framed studies and in contexts prior to the internet with networked communication generally occurring within a single business, research on networked communication and decision making reached a number of conclusions about communication using text via computer networks compared to communication when face-to-face. In computer networks, more people participated, more people were willing to respond to and criticise those higher in hierarchies, decisions were nearly impossible to reach and

people were considerably ruder to each other (Sproull and Kiesler 1993). Two fundamental issues that are recurrent when looking at social effects in relation to digital and internet technologies appear here in a sense of flattened hierarchies and of flaming and abuse online. Whenever text communication occurs researchers should be alert for these kinds of effects. In gaming immersive virtual worlds are now common, yet nearly all such worlds include text communication of some sort, putting some continuing dynamics of text communication over computer networks into the change of three-dimensional networked gaming.

More recently considerable work has been put into exploring the idea of platforms, while it is perhaps not yet clear how this work might coalesce, one of the dynamics that has emerged is about information on platforms. I explored this in relation to dynamics of recursion which argue that when a platform attracts activity it gains the ability to track and record that activity gifting to the platform a major information resource. The platform gains this information almost as a gift, or a surplus, which has been noted in the work exploring exploitation in social media which argues that the surplus is digital surplus value expropriated from the free labour of those using the platform. While these bodies of work are quite different, and my own work on the digital economy disagrees with the theory of free labour into surplus value, both agree on seeing that information flows to whoever controls a platform. This again is a dynamic which can be recurrently explored both across different platforms and in new platforms. It is also a dynamic that may be integrated in different ways in complex platforms (Jordan 2015; Dean 2012; Fuchs 2014).

The last sameness I would point to pushes back from digital socio-technologies in operation to consider a fundamental dynamic of information seen not only in corporate platforms but also in free online practices. As economists say, information is a non-rival good because the same 'bit' of information can be made available to many people simultaneously and with no degradation in the quality of the information. While economists term this a lack because lacking in rivalry makes information difficult to deal with in economic exchange, it should rather be termed the underlying dynamic of a social good; that information could be available simultaneously for complete use. This possibility has been actualised in a number of well-known and important socio-technologies, most famously perhaps in free software and its programmes like LibreOffice or Linux but also in the standards that inform the world-wide web creating a consistent but open information space and the collective research, writing and editing that makes Wikipedia (Jordan 2015, pp. 194-196; Jordan forthcoming).

While these free practices have been the subject of significant research and writing, I want to emphasise here not so much the examples across a range of different projects but the underlying commonality that what makes them possible and distinctive is their reliance on information's capacity for simultaneous complete use. The social and cultural 'free' in free software is the freedom to access the information that constitutes a particular software program and then to add information when altering that program that is in turn delivered back to all users.

Wikipedia works because anyone with access to the world wide web or the internet can read content at the same time as many others and there is the possibility of opening up the information to add to and change it. Such projects have led to a more general project in forming information commons, such as peer to peer networks or Scholz's platform cooperativism, which could deliver a wide social good based on this characteristic of information (Scholz 2016).

At the same time, the effort to make information rival, particularly for economic gain, continues and at different levels. Digital rights mechanisms are implemented to make an information good into something exchangeable and held exclusively. Films come with mechanisms meant to prevent copying and film industry representatives prosecute where they find sharing contravening their rivalry. There is here individualised non-rivalry at the level of particular information goods. There is also structural and sometimes semi-hidden non-rivalry. As mentioned above platforms are able to copy and take information about users of their platform and keep that information as their property. They may then generate more information by analysing the information they have taken or had exchanged for services. Or another example is the integration of the eme extension into the standards that govern the world wide web to standardise digital rights mechanisms, creating a mechanism for non-rivalry within one of the great organisations for simultaneous complete use. Simultaneous complete use is then another same that should be tracked across differences (Postigo 2012; Doctorow 2016).

These examples of digital social research underline how important and significant it can be to track what stays the same when our eyes are directed toward what is different. I could have drawn on other examples. For example, the network effect argues that nodes on a network become exponentially more valuable as the network grows and may in part explain how seemingly free to leave platforms can exert a non-formal lock-in. However, enough has been said establishing the ways some things may stay the same in a techno-environment of constant change. How might we understand this intersection of change and not-change, of same and not-same? The contrast so far has been between change and the same, with the same standing for whatever persists chronologically and change for what over time becomes different. Indeed, so far what I am proposing is in essence to do social and cultural research properly means, of course, to interrogate and refuse to accept that technology is somehow beyond critical understanding. The field of science and technology studies establishes this comprehensively. And, it is no bad thing to remind ourselves as researchers that when facing technologies that may be difficult to understand and are fast changing, that we should continue to conduct research that critically assesses socio-technological contexts. Yet, there is an interpretation of the challenge of constant technological change that gives us a little bit more explanation of what should be part of digital social research.

Claims about the difference and the failure of repetition are not always what they seem, neither are claims about sameness necessarily claims for an undifferentiated always-repeated identity. In this case, the claim about ongoing and

repetitive differences appearing in the world linked to altered technologies is rather a claim about the return of the same: it is in effect a recurrent claim that nothing can be said because difference overwhelms analysis. When technologists, or friends, claim that we digital social researchers cannot understand the digital world because it changes too fast they are, knowingly or not, dissuading us from analysis of that world. The claim of constant technological change is then not a claim about change at all, it is a rejection of analysis: don't worry, be happy, get a fitbit, smartwatch or whatever comes next.

Asserting that somethings remain broadly, even roughly, the same across techno-social change is then fundamentally not a claim about the return of sameness and a refusal of difference. Even in the examples I have given above there is change implied, differences appearing, within the same cultural dynamics. The claim is then not of sameness or difference but a refusal to be blocked by the fast repetition of techno-differences from the investigation and breakdown of techno-social contexts into what is remaining the same and what is differing in such contexts. A claim to exploring sameness and difference is a claim to criticality.

Drawing attention to the fast pace of digital and internet technological change can often be understood as a claim that change is not happening, there is only the state of rapid technological differentiation. The claim is that speed has overcome our ability to think about change, the maelstrom of technology has taken over and all we can do is look on (and buy more) and wonder. Analysing this claim, one that has been made to me on numerous occasions, shows that, fundamentally, its terms are misleading from its claims. Poking through its tenuous grasp on digital social research reveals not only that research indeed exists, even usually or normally exists, that grasps continuities across technological change, but that the original claim is not about change but about refusing to analyse digital technologies. The claim that we are being presented with irresistible, blinding change means that we are, instead, being presented with the same specific claim not to be critical, pointing at differentiation here masks a call to let technology run its course. As digital social researchers we know that 'technology' here means social and cultural forms of power imbricated with technologies and a refusal to think about such technologies would be a failure to understand our social worlds.

There is only a relatively small claim here, part of my argument is that digital social researchers are doing and should continue to do their analytic and critical work on digital and information technologies, refusing to isolate those technologies from social and cultural differences and power. The other part of my argument is that claims that there is rapid change that argue for this by drawing attention to information and digital technological change, are really arguing for the same thing: the inevitability of whatever world these technologies are creating. This is a philosophical dead end, difference and sameness or difference and repetition are not of this form. This is a digital sociological and cultural studies dead end, research in these disciplines already explores, establishes and analyses continuities and discontinuities in technologically mediated societies. This is a political dead end, it

incites us to stow away our criticality and leave it to those behind the technologies (because Facebook, Google, Baidu and the rest are all doing so well for all of us). Digital social research rejects dead ends and is rather a complex and critical analysis of how sameness and difference creates our socio-technological world.

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JOURNAL OF DIGITAL SOCIAL RESEARCH

WWW.JDSR.IO ISSN: 2003-1998

VOL. 1, NO. 1, 2019, 31–34

TACIT LABOURS OF DIGITAL SOCIAL RESEARCH AS AN EARLY CAREER RESEARCHER

Crystal Abidin*

ABSTRACT

Consider this essay as two brief confessions on the pressures of conducting 'digital social research' as an Early Career Researcher. Specifically, the confessions call out two emergent norms in academia: that early career digital social researchers ought to be visible and trackable online, and that we ought to focus on novel and innovative phenomena pioneered by 'the youngs'. These two expectations have insidiously been integrated into early career digital social researchers' repertoires of 'tacit labours' – "a collective practice of work that is understated and under-visibilized from being so thoroughly rehearsed that it appears as effortless and subconscious." (Abidin 2016, p. 10) – in that it is assumed that being 'Extremely Online' and 'Young <tm>' are generational literacies 'naturally' hardwired into our systems.

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Consider this essay as two brief confessions on the pressures of conducting 'digital social research' as an Early Career Researcher. Specifically, the confessions call out two emergent norms in academia: that early career digital social researchers ought to be visible and trackable online, and that we ought to focus on novel and innovative phenomena pioneered by 'the youngs'. These two expectations have insidiously been integrated into early career digital social researchers' repertoires of 'tacit labours' – "a collective practice of work that is understated and under-visibilized from being so thoroughly rehearsed that it appears as effortless and subconscious." (Abidin 2016, p. 10) – in that it is assumed that being 'Extremely Online' and 'Young <tm>' are generational literacies 'naturally' hardwired into our systems.

The first confession is that scholars and the academy are generating *para-prestige economies that proffer sociable metrics as a mark of 'good' or 'successful' research.* Young scholars like myself are constantly being told to establish the visibility of our portfolios in order to secure academic jobs that are increasingly competitive, scarce, and precarious. Where some aspiring academics still attend networking sessions across continents to practice our elevator pitches to rotations of acquaintances over cocktails and finger food, these days it feels as if the 'networking' is increasingly digitized. As the systems of visibility and status symbols of what counts as a 'successful' researcher develop over the years, even senior scholars sit through sessions with librarians on the importance of ORCIDs (Open Researcher and Contributor ID), DOIs (Digital Object Identifiers), Google Scholar profiles, and the world of academic social networking such as Academia.edu and ResearchGate in order that we be traceable, searchable, discoverable. Academic success is often crassly measured through digital visibility and quantifiable metrics including citation rates, article downloads, media coverage, and even 'alt-metrics' on social media. And what eventuates is a cult of digital sociability.

Scholars have long been intrigued with the practice of high visibility in academia, even conducting research into the histories and career trajectories of 'dominant' (Lamont 1987) and 'internationally famous' (Clegg 1992) scholars. So pertinent is visibility to a successful academic career that scholarly opinion editorials are publishing 'how to' guides (Tickle 2012), contemplating the importance of being visible (Shea 2014; Walsh 2015), and considering the drawbacks of highly visible academic celebrities (DuBois 2012; Miles 2012). While there are no quick solutions to 'the visibility games', senior scholars who have influence over institutional agenda setting can help to recalibrate the importance of 'social media presence' from the public, popular, and populist, to the communal, community, and civic, giving weight to the more qualitative and tangible experiences of social good.

The second confession is that (time-pressured) scholars are provoking the *feedback loop of disproportionate information amplification between journalism and academia*. This frustration stems from the cycle of: a) journalists scouting through social media content in search of potential news angles, albeit limited by the filter bubble of algorithmic recommendation systems tailored to their digital footprints

and pet interests → b) journalists churning out popular media articles focused on emergent or obscure aspects of (especially youth) internet cultures, often framed to play up a sense of exotica to generate more pedestrian interest or to serve as clickbait → c) academics collating such popular media and news articles as data sets for content analysis as if they are representative of the state of digital or social trends → d) academics relying on the content analyses of such 'public data' to churn out publications, since it is more accessible than other time- and resource-intensive methods in the climate of 'publish or perish' → e) journalists' pet interests or observations becoming institutionalised as scientific truths (of sorts) through academics' publications of such analyses.

As a result, journalists eventually emerge as the gatekeepers and vanguards of how academia documents and investigates digital phenomena, and the cycle routinely and systemically supresses the variety and depth of digital cultures which is overshadowed by populist perceptions that are ultimately framed to maintain viewer traffic for commerce. This is all the more troubling when journalists without area- and culture-specific expertise surmise digital phenomena via ethnocentric lenses – as was the case in the global reportage of the MeituXiuxiu photo editing app during its virality in January 2017, that was distilled as "weird", "bizarre", and "alien" (wishcrys 2017). Following social theorist Raewyn Connell's call to Southern Theory (2014, p. 218), we ought to judiciously scrutinise what we consider "mainstream literature in a field of practice" to uncover in our process of knowledge production a "northern dominance of the discourse, and extraversion in the global south". To offset this, initiatives to lubricate journalists' access to scholarly insight and maintain digital social 'research' have resulted in databases cataloguing details of academic available for public commentary, such as Expert Connect (2019) in Australia and Science Media Center (2019) in Germany. Academics have also been encouraged to publish public-facing, popular media versions of our research on informed news outlets such as *The Conversation* and *The Guardian,* although the drawback is that such labour is usually uncompensated and can disproportionately disadvantage precarious sessional staff who cannot sustain themselves on 'exposure dollars'.

As we launch the Journal of Digital Social Research, may we also contemplate the uneven tacit labours involved in digitizing and socializing research.

ACKNOWLEDGEMENTS

I would like to thank Evelyn Runge for alerting me to the Science Media Center initiative in Germany, and Gabriele de Seta and Megan Lindsay Brown for shaping my insights through our collaborations and friendship.

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JOURNAL OF DIGITAL SOCIAL RESEARCH

WWW.JDSR.IO ISSN: 2003-1998

VOL. 1, NO. 1, 2019, 35–40

WHAT'S AT STAKE IN DIGITAL *SOCIAL* RESEARCH?

Nick Couldry*

ABSTRACT

I am a social researcher who uses both theoretical and empirical enquiry not so much to describe the social as to understand the conflicts involved in constructing an order that appears to us as 'social'. I seek to address the paradox of doing social research: for the social is not something concrete at which we can point, but a dimension of how whatever in our life is concrete holds together as a world. Media are crucial to what hangs together as a world – and in ways that much social research to this day still ignores. Media are in the contemporary era irrevocably 'digital': they take forms that automatically bring possibilities for recombination, retransmission, and reworking by multiple actors. As such, and unavoidably, digital media can be woven tight into the fabric of social life much more than previous media. But what does this mean for the social world, that is, for our possibilities to enhance or undermine how we live together today?

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If asked to categorize my work, I would probably say that I am a social researcher who uses both theoretical and empirical enquiry not so much to describe the social as to understand the conflicts involved in constructing an order that appears to us *as* 'social'. This might seem rather roundabout, even evasive, but anything briefer would cover over the paradox of doing social research: for the social is not something concrete at which we can point, but a dimension of how whatever in our life is concrete holds together *as a world*.

Media are crucial to what hangs together as a world – and in ways that much social research to this day still ignores. Media are in the contemporary era irrevocably 'digital': they take forms that automatically bring possibilities for recombination, retransmission, and reworking by multiple actors. As such, and unavoidably, digital media can be woven tight into the fabric of social life much more than previous media. But what does this *mean* for the social world, that is, for our possibilities to enhance or undermine how we live together today? It is that question that I suggest is at stake in debates about how best to do digital *social* research.

1 A PERSONAL ASIDE

That said, I would now give a different sort of answer to the question of what's at stake in digital social research than I would have given in the early years of this decade. At that time, my priority in thinking about media through a social lens was to avoid two contrasting forms of reductionism. On the one hand, a media-centrism that took off from the undoubted role of digital media (especially social media platforms) in the texture of daily life to proclaim that we lived, already, a 'media life': Mark Deuze's elegant book (2012) was the best-known version of this move. My concern was that it unwittingly closed off from view the still difficult, still highly contestable, ways in which media come to occupy this indispensable role in contemporary life – ethically, politically, and socially. On the other hand, I wanted also to resist a reductionism coming from 'social theory' that collapsed all inherited accounts of the social world in favour of a new language of networks, assemblages, and sheer heterogeneity: I mean the many offshoots of Bruno Latour's work in Actor Network Theory, including various forms of STS ('science and technology studies'). This concern cut across my huge admiration for Latour's achievement in reformulating our understanding of the material basis of what sociologists still call 'power'. Yet what was lost in the process, and particularly in Latour's grander proclamations (for example Latour 2005), was any sense of what remained *stable and consistent* in the dizzying complexities of how combinations of human and non-human actors somehow worked together to produce something like order. In particular, what was lost was any grasp of the enduring importance of the work of representation, including of course media institutions' role in representing the world (Couldry 2004; Couldry 2012, pp. 30–31).

In response to these twin reductionisms, one from media theory and one from social theory, I offered what I called a 'socially oriented media theory': an approach to thinking about social life and 'media life' that 'addresses the construction, representation and contestation of the social' (Couldry 2012, p. 8), and media's role in that often submerged process. That, in a sense, had been my interest from the start of my research career through what previously I formulated from the perspective of media institutions, and their construction of themselves as central: 'the myth of the mediated centre' (Couldry 2012, chapter 3). For sure that myth worked through a discourse by media about the social, and what hold people and institutions in communication with each other in a particular territory. But in my earlier work the construction *of the social itself* received less emphasis.

What I did not expect at the start of this decade was *how crucial* that question of the construction of the social would become as a vantage-point from which to think about what *media* do. That all changed when I began to register, rather later than some, the work of data within media production and thereby in social production. Two experiences were crucial in this shift in my perspective.

The first was being part of the CultureDigitally network of academics founded by Tarleton Gillespie and Hector Postigo in 2010 which brought together people (from games designers to historians and anthropologists) at various career stages to think together about what was happening to culture in the digital age: its debates still continue in an online form[1]. Being part of this network challenged me to continue expanding the theoretical formulations of the book on which I was then working (*Media Society World*, from which I have already quoted to encompass a far-wider range of computer-driven forms than I discuss in that book.

The second key experience, in parallel, was my huge privilege in leading what became the Storycircle project at Goldsmiths, University of London.[2] One moment in that project was crucial. In a project about digital storytelling, but certainly not about data, we found that essential to the experience of running a local organization for giving voice to local people was the management of data around that organization's website: understanding how people moved around it, why they did – or often did not – feel disposed to click on links or recirculate videos they had just seen. The world of social action, we started to realise, was suffused not just with media (of course it was!) but with processes of datafication and the measurement of data. We coined a term for a social research perspective that could register this: 'real social analytics' (Couldry, Dickens and Fotopoulou 2016). This is not the place to go into the detail of that idea, but the key point here is that I had caught up, finally, with a transformation that was already troubling - or exciting - many scholars: the role of algorithmic processing of data in constructing the worlds *of appearance* that pass for reality under particular conditions, pressures and needs.

[1] See http://culturedigitally.org/

[2] https://storycircleuk.wordpress.com/ The team of researchers was myself (current institution, LSE), Richard Macdonald (Goldsmiths), Wilma Clark (independent researcher), Luke Dickens (Kings College, London), Aristea Fotopoulou (Brighton), and Hilde Stephansen (Westminster).

From that point on, I realised that my own long-term project of understanding how media construct themselves as central institutions, and in turn construct the social for their audiences, had been, itself, reoriented towards a new focus: computational processes that, to be honest, I had not previously set out to study at all.

I do not delude myself that this 'conversion' to interest in datafication is unique: on the contrary, it seems to characterize many colleagues in the interdisciplinary space of digital social research, and from all parts of the world. Under way is a profound and by no means entirely voluntary shift in the centre of gravity of information and communications over the past decade, which is changing the terms of digital social research.

2 SOME PRINCIPLES FROM SOCIAL THEORY

What then do I draw from this personal journey in terms of principles that a social-theoretic perspective might offer to debates on new directions for digital social research? In lieu of a longer argument, let me offer a few starting points by way of some quotations.

Everything starts, *first*, from the fact of interdependence as a basic characteristic of human life. How we are interrelated, and what particular material forms of interdependence become important at different times and places historically is highly contingent, but the fact that social order is built from the necessity of human relations remains. This point is elegantly summed up in historian William Sewell's statement that 'the social' is simply 'the various mediations that place people into "social" relations with one another' (2005, p. 329). Digital social research foregrounds those changing 'mediations'.

Those mediations are only possible, *second*, on the basis of a material infrastructure. The social world is therefore always double in nature, both form of meaning *and* built environment (Couldry and Hepp 2016, p. 3, drawing on Sewell 2005, p. 321). It follows that digital social research is always both about complexities of meaning and about complexities of environment, and the endless interrelations between those two sorts of complexity.

Third, developing the same point about doubleness, infrastructures are built both through material connections and through new configurations of actors and actions based in meaning, and in particular in changing regimes of value. In his last book on the profound social changes that flowed from new uses of the written word from the 11th century onwards, social theorist Ivan Illich expressed this in terms of changes in the 'axioms' of human life. 'Axioms' are what is *valued*: they congeal an 'understanding of the world, society and self' (Illich 1994, p. 4, discussed by Couldry and Hepp 2016, p. 8), and make it practical. The world is currently going through a transformation of the axioms around which human interdependence is configured. That, above all, is what makes digital platforms important for social research, because they configure what *counts as* social in new ways.

For this reason, *finally,* relations of power are at the heart of digital social research. Counting this *as that* is already a relation of power, or at least a claim on power, which may or may not be instantiated in practice (Bowker and Star 1999; Espeland and Sauder 2007). French sociologist Luc Boltanski expresses this same principle beautifully in his book *On Critique* which attempts to re-ground social critique in a deeply pluralist and materialist framework. (2011, p. 57). 'Reality', he writes 'tends to coincide with what appears to hang together . . . [that is] with *order*'. Order however is not natural, but highly contingent, shaped by the changing institutions that have power over 'the *whatness* of what is' (2011, p. 57, p. 56, added emphasis). Boltanski's main example is law, but the same argument applies well to media institutions' historic role in naming reality and, perhaps even better, to the role of platforms and their underlying artificial intelligence processes in categorising the flow of social life so that data from it can be processed for value.

The outcome is a different type of social texture, still meaningful of course and without doubt still an environment, but differently negotiable from earlier social textures: a difference captured perhaps by the passive voice in the terms 'platform*ed* sociality' or 'comput*ed* sociality' (respectively, Van Dijck 2013, p. 5; Alaimo and Kallinikos 2017, p. 177, added emphases).

Is the territory of social research that results from taking 'the digital' seriously an intimidating, even a disturbing one? Certainly. Is it exciting? You bet it is.

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JOURNAL OF DIGITAL SOCIAL RESEARCH

WWW.JDSR.IO ISSN: 2003-1998

VOL. 1, NO. 1, 2019, 41–44

#IFTHEYGUNNEDMEDOWN: HOW ETHICS, GENDER, AND RACE INTERSECT WHEN RESEARCHING RACE AND RACISM ON TUMBLR

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ABSTRACT

Challenges related to digital social research have centered upon protection of the participants whose activity online create the data sets used for study. Ethical issues related to digital participant protection include how researchers interact with research participants. Some researchers argue that particular sites online should be considered "public," and as a public site of study, that type of digital research does not require participant permission to study. More recently, there has been a push from some editors to researchers to contact individuals to obtain their permission to be studied, even for areas online that might have been regarded as public. In this essay, I share how ethics, gender, and race intersect when researching race and racism on Tumblr through #IfTheyGunnedMeDown.

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1 INTRODUCTION

Challenges related to digital social research have centered upon protection of the participants whose activity online create the data sets used for study. Ethical issues related to digital participant protection include how researchers interact with research participants. Some researchers argue that particular sites online should be considered "public," and as a public site of study, that type of digital research does not require participant permission to study. More recently, there has been a push from some editors to researchers to contact individuals to obtain their permission to be studied, even for areas online that might have been regarded as public. In this essay, I share how ethics, gender, and race intersect when researching race and racism on Tumblr through #IfTheyGunnedMeDown.

2 CONTEXT

On August 9, 2014, unarmed Black 18-year-old teenager Michael Brown was shot and killed by 28-year-old white police officer Darren Wilson in Ferguson, Missouri. As media outlets began to cover the story, some news outlets chose an image of Brown that featured him as a high school graduate, in traditional cap and gown, holding a diploma cover. Other news sources picked a more controversial picture of Brown in a basketball jersey, holding his fingers up in what some termed as a "gang sign." In response, Mississippi attorney C.J. Lawrence started the hashtag #IfTheyGunnedMeDown, with which social media users posted two different pictures of themselves, one hegemonically "positive" and the other "negative" (both concepts are racialized). Implied within the hashtag was the question, made literal on the Tumblr with the same name: "Which picture would they use?" The use of "they" and "me" is an implied critique of the ways in which white-dominated mass media ("they") choose to portray people of color ("me"), particularly regarding the decision of which photo, with accompanying positive or negative connotations, to run alongside a story when a member of a minoritized group has been killed.

As an activist scholar, I was drawn to #IfTheyGunnedMeDown as a form of social media activism by and for the African American community. I chose the hashtag as it lived on a particular Tumblr site as a research topic to prioritize the full, unfettered voice of participants: Tumblr allows for captions by those posting photos that exceed the 144-character limit of Twitter, providing crucial, contextual description of each post in the words of the individuals themselves. I examined the entire archive of #IfTheyGunnedMeDown posts on one Tumblr[1]. My data set spanned from August 11 to August 21, 2014, which were the dates of activity for this Tumblr. All of the images were selected and shared publicly by various users in nearly 250 individual Tumblr posts.

Of those posts, the vast majority (95%) appeared to reflect African American digital practices, upon which I presented at the 2015 annual conference of the

[1] See: iftheygunnedmedown.tumblr.com

Association of Internet Researchers. Recently, building upon my earlier research for a different study, I decided to focus on the 5% of participants that identified, through chosen username, explicit photo, or linguistic content, as *not* Black.

As I began to write my results with the goal of gaining insight into how solidarity is enacted across racial boundaries, I prepared quotes and excerpts from online participant testimony on this Tumblr, which is normally common practice for "public" artifacts in internet studies. After I submitted an initial draft, I received a query from an editor about contacting individuals to obtain their explicit permission to be studied.

On the surface, the request is well-intentioned and protects Tumblr users, especially in light of recent debates about ownership and quotations of publicly-available internet commentary. However, this query prompts two complicated considerations related to research ethics when it comes to privacy issues in studying race and racism on Tumblr, revealing a terrain of power that is not as straightforward as it seems, especially for a woman of color researcher.

3 PERMISSIONS: POTENTIAL HARM TO THE PARTICIPANT?

An ethical issue for digital social researchers is to protect the privacy of online users. Yet, how does a digital social researcher track down permissions in Tumblr, a space that is notoriously ephemeral? Some Tumblr users change their name, such that the name may not be reflected in the permalink at the bottom of their post. Or, Tumblr users may deactivate their account, whose page will then lead to the error message of "Whatever you were looking for doesn't currently exist at this address." To put it another way: If Tumblr users don't even "currently exist," can we cause them harm?

There are other ways to try to contact users, such as looking for a person's username in a general online search or putting a person's username (especially if the Tumblr username appears to be a person's legal name) into Facebook or Twitter, to see if the results might lead to an email address or another way to reach the person. In some instances, Tumblr users do opt to connect their Facebook, Twitter, and Google Plus, to their publicly-available info on Tumblr. However, those methods for seeking a person's identity are *also* fraught with ethical questions: Regardless of whether I could find the person, *should* I be using these other online avenues to narrow the distance between the person on Tumblr and the person off of Tumblr? By doing so, in my attempt to get their permission, am I actually trampling upon the person's privacy? To what extent should the researcher go in the pursuit of obtaining permission, while still preserving the privacy of the participant? In which cases should attempts to obtain permission from users suffice as due diligence and "ethical practice" by a researcher?

4 PERMISSION: POTENTIAL HARM TO THE RESEARCHER?

Beyond the logistical issues of whether contacting a participant is even possible, or whether trying to find a way to reach the participant might violate the participant's privacy, the question of potential harm to the *researcher* arises when it comes to studying topics of race and racism. As a woman of color, my reaching out to individuals whose Tumblr presence I might critique in any way as problematic puts *me* in a vulnerable position. Users that later read my work and interpret the way I portrayed their Tumblr activity as negative, racist, or problematic might want to retaliate, and my contacting the person to obtain their permission has suddenly made the person's access to me easier than if I had not tried to seek the person's permission initially.

It is as if the adage of not talking to strangers from fear of harm becomes even more salient when it comes to examinations of online discourses about race by researchers from underrepresented backgrounds themselves. For example, what are the extra considerations that a researcher of color should take when analyzing *racists* on Tumblr? How far should the
researcher go in supplying contact information to Tumblr participants in an ethically-led study? Some of these issues might be addressed during the institutional review board (IRB) process, but IRB protocols and standards are usually highly one-sided to protect the participant only, presuming the safety of the researcher -- an example of a default presumption of embodied whiteness. Ultimately, how should the relationship between the privacy of the researcher and the privacy of the participant be weighed, given both the unequal power dynamics of conducting research and the unequal power dynamics of white/male supremacy?

5 ALLIANCE, SPACE, AND POSITIONALITY

So, what does online discourse reveal about perceived commonalities and differences between Black and non-Black participants on the #IfTheyGunnedMeDown Tumblr? Overall, everyone that was included on this Tumblr, irrespective of race, purported to be treated similarly in terms of bias to how Michael Brown was portrayed by the media. Examples from Asian and Latina users reflected self-described positionalities similar to and adjacent to those from the Black community, in acts of alliance. Those demonstrations were in contrast to examples from white users that came across as invasive, problematic reflections of white privilege, colonizing a digital space that presumed a safe commonality in non-whiteness. Not all spaces are meant for all people. Not all biases in the media operate the same way across the intersectionality of race, gender, and sexuality. And not all requests for permission from participants fall evenly on researchers: in the pursuit of protecting participant privacy, researchers from minoritized populations have additional considerations for protecting our own privacy to minimize harm both to the participant and researcher.

JOURNAL OF DIGITAL SOCIAL RESEARCH

WWW.JDSR.IO ISSN: 2003-1998

VOL. 1, NO. 1, 2019, 41–48

DIGITAL SOCIAL FUTURES RESEARCH

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ABSTRACT

Social research is almost inevitably digital: in its subject matter because the digital, social and material dimensions of our worlds and lives are now inseparably entangled; and in its methods as our research techniques and encounters are, even if indirectly, implicated with digital technologies, platforms and practices. Social scientific renderings of digital technologies and media and everyday life propose a range of discipline-specific ways of understanding this relationship between the online/offline and digital/material, and a large and growing literature about digital methods and practice for research and its dissemination. The new challenge is to advance from this strong base of critical research and scholarship within the social sciences and humanities, in two ways. First towards interdisciplinary interventions that will bring theory, methods and concepts into dialogue with technology and design disciplines, and policy and industry agendas; and second to engage with emerging digital technologies and communication, including Artificial Intelligence (AI), Machine Learning, and Automated Decision Making (ADM), and the new socialities, everyday life practices and business models associated with these technological possibilities.

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Emerging technologies are often portrayed as primed or ready to launch into markets, but not (yet) established as ubiquitous. They are represented in dominant science, technology, business, policy narratives as having potential to change, impact on or influence society. For example, Scientific American describes their 2018 top 10 emerging technologies as 'Disruptive solutions that are poised to change the world', and asks 'How will technology change your life in the near future?'[1]. Digital anthropologists (and social science and humanities scholars) have created a strong base of research that shows that technologies themselves change neither the world nor individual people's lives. Rather we understand technologies as coming into being in the world and our lives in relation to what people do with them. A significant literature demonstrates how digital technologies, platforms, software and practices associated with them – including for examples those relating to smartphones, computer games and more – have become part of, appropriated into and improvised with in everyday life. However, the study of emerging technologies differs from that of the finished product, which might subsequently be consumed, or appropriated by its user, since it involves the study of technologies that might be inevitably unfinished. For example, the Tesla car which can be changed through a software update, and therefore is experienced not as a complete product, but through the owner's anticipation of its status as a changing product (Lindgren et al. 2018).

Thus as new technologies - which might change during our ownership or use of them, interact 'intelligently' with us, learn from or with us in the course of our relationships with them, and take decisions - start to inhabit the horizons of the world that we both begin to experience and anticipate, we need new theoretical and methodological modes of understanding the ways these

[1] See https://www.scientificamerican.com/article/the-top-10-emerging-technologies-of-2018/.

technologies configure with people and other non-human things and species in everyday life and society. For example, automated decision-making, artificial intelligence and predictive data analytics are increasingly possible and present in our everyday lives, and configure with societal, political and economic structures, and the inequalities in which these are already entangled. Digital social research has multiple roles in this new context. Here I focus on a particular strand of research, through the example of the study of digital technologies and media in everyday life. In this field I have proposed going beyond a focus on how digital technologies are experienced, appropriated and used by consumers, towards a theoretical, methodological and empirical focus encapsulated by a Digital Futures Anthropology (Pink forthcoming) and an Interventional Design Anthropology of Emerging Technologies. In common these two moves draw on design anthropological theory and practice developed in my collaborative work, to emphasize the emergent and inevitably incompleteness of digital-material configurations (Pink et al. 2016), notions of possibility and uncertainty (Akama et al. 2018), futures as non-predictive (Pink and Salazar 2017) and the need for new methodologies and ethics in a future oriented research agenda for researching the possible but as yet unknown (Pink and Salazar 2017; Pink 2017). A critical and interventional design anthropology of emerging technologies moreover seeks to: engage with policy, industry and technology design organizations; create responsible and ethical interventions in everyday life and technology design environments; and contest the dominant narratives that advance the 'solutionist' (Morozov 2013) paradigm, which is coherent with problematic claims that human behavior can be changed and wellbeing improved through the influence of technology.

I call for digital social research that is critical, involves interdisciplinary and inter-sector engagements, which engages with and contests how technological futures are conceptualized in other disciplines and outside academia. Digital social researchers would engage practically and conceptually in the processes through which technology is designed and is emerges in society and everyday life, are understood and implemented. To achieve this, I propose: bringing together social science research and theory to contest the concepts that are used in prevalent discourses and technology design processes; collaboration with those whose ideas and practices are different to ours, to demonstrate the new insights social research brings to complex problems; and new modes of engagement outside academia, through video, visualizations of human experience, card sets and more. This is a work in progress and I invite readers to join this endeavour, and learn how, with colleagues and collaborators internationally, we are developing design anthropological research, scholarship and intervention[2].

[2] View my Why the World Needs Anthropologists keynote (2018) here: https://www.youtube.com/watch?v=xrRPu3kE-G0.

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