DATA POWER: global in/securities
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Book of Abstracts

Oral presentation

11:00 - 12:30   *SFG 0150*

Critical, theoretical and feminist approaches to data in/securities

Critical, theoretical and feminist approaches to data in/securities

Data Feminism

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Content
As data are increasingly mobilized in the service of global corporations, governments, and elite institutions, their unequal conditions of production, their inequitable impacts, and their asymmetrical silences become increasingly more apparent. It is precisely this power that makes it worth asking: "Data science by whom? For whom? In whose interest? Informed by whose values?" And most importantly, "How do we begin to imagine alternatives for data's collection, analysis, and communication?" These are some of the questions that emerge from what we call "data feminism", a way of thinking about data science and its products that is informed by the past several decades of intersectional feminist activism and critical thought, emerging anti-oppression design frameworks, and scholarship from the fields of Critical Data Studies, Science & Technology Studies, Geography/GIS, Digital Humanities and Human Computer Interaction. An intersectional feminist lens prompts questions about how, for instance, challenges to the male/female binary can also help challenge other binary and hierarchical classification systems. It encourages us to ask how the concept of

invisible labor can help to expose the gendered, racialized, and colonial forms of labor associated with data work. In this paper, we will introduce six focal points for data feminist work: examining and dismantling power, rethinking binaries, considering context, embracing pluralism, making labor visible, and legitimizing embodiment. The goal of this work is to transform scholarship into action – to operationalize feminism in order to imagine more ethical and more equitable data practices.

Critical, theoretical and feminist approaches to data in/securities

Situating data (justice) in critical social theory

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Content
In recent years we have seen a prominent shift in our understanding of what is at stake with the mass collection of data and use across social life, a shift that has particularly moved the discussion beyond a primary focus on privacy and has instead highlighted issues that relate to questions of social and economic justice, such as discrimination, inequality, corporate power and democratic process. Yet in thinking about how to address such issues, there has been a tendency to draw on understandings of justice that have their roots in what Young (2011) refers to as the 'distributive paradigm' that sees justice as the distribution of goods. For example, emphasis has been placed on conceptualising data as a resource that can be 'owned' and therefore subject to distribution, sometimes expressed in terms of 'self-sovereignty'. In parallel to this, amongst engineers, a community of research and practice has been established that seeks to address concerns with 'bias', 'fairness' and 'transparency' by auditing algorithms in different ways to account for skewed datasets, the weighting of variables and other computational criteria for 'fair' outcomes. Whilst the distribution of goods, including informational goods, is an important aspect of justice and the quest to address unfairness in technical systems highlight an engagement with the lack of neutrality in data processes, we can also draw from critical social theory, and intersectional feminist perspectives in particular, in order to highlight the limitations of such approaches. In drawing on feminist critiques in social justice debates, we are invited to consider the social justice implications of data and the automated processing of data, not by turning to the technical systems or treating data as a siloed technical artefact, but by situating data-driven technologies and their deployment in relation to social structures and wider conditions of 'oppression and domination' (Young 2011). Indeed, as Fraser (2008) has argued, a feminist critique pushes for a need to question the very 'grammar' of justice and to shift away from universalist principles towards lived experiences and contextual analysis that include an account of the structural power in place for determining the what, who and how of justice. In this paper, I will draw on critical social theory and feminist perspectives to advance an understanding of data and its relation to social justice.

Critical, theoretical and feminist approaches to data in/securities

Understanding data power from a feminist perspective: embodiment and the politics of care

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Content
PANEL TITLE: "Feminist approaches to data practices". PANELISTS: Lina Dencik, Catherine D'Ignazio, Aristea Fotopoulou, Stefania Milan.

PANEL RATIONALE:

Data-based systems and technologies pose pressing issues in relation to social justice, and there is great

need for focused and explicit critiques that addresses intersecting structural inequalities such as gender, race, ability and sexuality. Embarking from conceptualisations of data practice, this panel explores how feminist theoretical, methodological and praxis approaches can help us understand the structures of power and privilege is datafied worlds.

PAPER ABSTRACT:

This theoretical paper introduces how the notion of "care", as developed in feminist science and technology studies (de la Bellacasa 2011), can be a productive analytical and critical approach when scrutinizing the manifestation of power relations in data practices. The matters of power and the politics of data have far reaching implications for the politics of the everyday. The paper argues that approaching such political issues in data practices as "matters of care" allows us to account for their affective, embodied and material elements, including the habitually devalued human labour of data users, activists, producers, consumers and citizens. Outlining the differences between justice (Dencik et al. 2016, Taylor 2017) and ethics approaches to data power, it is further shown that, guided by the question "Why do we care?", the notion of care inserts particularity and empathy in social justice frameworks. The paper provides examples of areas of application of an approach to data power guided by feminist politics of care, alongside issues of data governance, regulating the data-driven economy and data privacy laws. In this way the paper maps a theoretical roadmap of feminist data studies and practice theory, which is focused on materiality and embodiment and is committed to unsettling the power relation of race, class, gender and ability in datafied worlds.

References
de la Bellacasa, M.P., 2011. Matters of care in technoscience: Assembling neglected things. Social studies of science, 41(1), pp.85-106.
Dencik, L., Hintz, A. and Cable, J., 2016. Towards data justice? The ambiguity of anti-surveillance resistance in political activism. Big Data & Society, 3(2), p.2053951716679678.
Taylor, L., 2017. What is data justice? The case for connecting digital rights and freedoms globally. Big Data & Society, 4(2), p.2053951717736335.

Critical, theoretical and feminist approaches to data in/securities

What feminist theory of datafication emerges from contemporary data activism?

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Content
Data activism articulates critical interpretations of datafication, wiring them in a myriad of sociotechnical practices that directly question mainstream rituals such as the quantification of human existence, the blanket monitoring of citizens, and the institutional rhetoric of transparency. While in its early days data activism leveraged mostly cypherpunk and/or techno-positivist narratives, these increasingly make room for feminist and postcolonial interpretations of the consequences of datafication for individuals and communities. But what does it mean to be a feminist in the age of datafication? This paper asks what feminist theory(ies) of datafication emerges from contemporary data activism. Grounded on a rich body of qualitative data gathered over the period 2015-2019 and consisting of over 200 semi-structured practitioner interviews and extensive participation in activist events, the paper investigates the co-constitution of feminist data activism projects and their material counterparts, namely apps, websites, and artistic interventions. It looks at projects like Chupadatos ("the data sucker"), by the Latin American organization Coding Rights, which questions gender-based discrimination and anti-feminist narratives encoded in tracking and dating apps (https://chupadados.codingrights.org/en/). Similar to Wajcman (2010) and Costanza-Chock (2018), this paper finds that the relationship between data/fication and gender is situated and fluid. Feminism and intersectionality emerge as fruitful venues to rethink gender-based discrimination and the sociotechnical reproduction of the gender binary.

Cited works
Costanza-Chock, S. (2018). Design Justice, A.I., and Escape from the Matrix of Domination. Retrieved from https://jods.mitpress.mit.edu/pub/costanza-chock?version=c5860136-8a6c-424b-b07c-9c8c071615b0

Wajcman, J. (2010). Feminist theories of technology. Cambridge Journal of Economics, 34(1), 143–152.

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submitted as part of the PANEL: "Feminist approaches to data practices".
Data-based systems and technologies pose pressing issues in relation to social justice, and there is great need for focused and explicit critiques that addresses intersecting structural inequalities such as gender, race, ability and sexuality. Embarking from conceptualisations of data practice, this panel explores how feminist theoretical, methodological and praxis approaches can help us understand the structures of power and privilege is datafied worlds.
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Critical, theoretical and feminist approaches to data in/securities

Towards a feminist sociotechnical understanding of hybrid data infrastructures

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Content
Data driven technologies are on the forefront when it comes to both an often naïve optimism considering their ability to solve today's problems (cp. "solutionism" Morozov 2013) and diffuse fears regarding their assumed potentiality. Despite publicly debated problematic dimensions of data technology, the rise of monopoly-like platforms (Srnicek 2016) depend on vast amounts of user generated data and their owners' power appears infinite. The common "prosumer" appears to be stuck in a passive position, merely more than a data supplier. Recent case studies, however, demonstrate how these systems have the potential to perpetuate and amplify social inequalities (Eubanks 2018). We argue that the hegemonic decontextualized notion of data infrastructures further intensifies problematic phenomena and shifts the power balance to the detriment of people.
Thus, we propose to reconfigure data driven technologies as hybrid complex sociotechnical infrastructures that are enacted through human practices (Mol in Seaver 2017). Drawing from feminist research further facilitates a more human-centered perspective and raises awareness towards experience, context, situatedness, historic background and power relations. Feminist research has a long tradition of interrogating practices of how data is collected, categorized, processed and used, ranging from revisiting epistemologies (Harding 1986, Hartstock 1983) to empiricism (Hundleby 2011) as well as sorting and classification systems (Bowker&Star 1999). Knowledge about previously invisible labor, agency and context is vital for the recalibration of power dynamics.
The interdisciplinary discussion between computing, sociology and gender studies promotes a shift in methodological lens and provides grounds for real-world case studies.

Oral presentation

11:00 - 12:30   SFG 1010

'Good' data, data justice and well-being

'Good' data, data justice and well-being

Beyond the Dystopian Features and Futures: A Framework for Thinking about 'Good data' and 'data justice' in the Global South

F. Ustek Spilda, A. Powell

London School of Economics, Media and Communications, London, United Kingdom

Content
"Tech for Good" has become a popular phrase for technological ventures with an interest in 'doing good.' From ventures that aim to bring grid to off-the-grid corners of the Global South to start-ups that aim to bring safe contraception to the world's populous and poor countries, connected technologies, especially internet of things (IoT) has been put forth as the panacea to world's all development ills. The motto "Anything that can be connected will be connected" is reflected in the growing production and consumption of IoT products in the market with 'good' intentions and the "tech will save us" sentiment. But how does this race to solve the world's problems with emerging technologies, such as the IoT, further or contest global in/securities? This is the question we investigate in this paper. Based on a multi-site ethnographical fieldwork with IoT developers, we investigate the IoT space as a locus of responses to the existing global insecurities. Our aim is to provide a grounded analysis on how 'good' is enacted in the technology space and what kind of data justices are imagined and acted upon. In doing so, we challenge the top-down data justice frameworks and tick-box legal regulations recommended to guide or assess current data regimes. Instead, we would like to use this presentation to test our conceptual framework based on Virtue Ethics, Capabilities Approach and Care ethics with data colonialism.

'Good' data, data justice and well-being

Datafication for the public good? An inquiry into personal data use at the city level

M. Micheli

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Content
An increasing amount of personal data is currently generated as a by-product of human activities and social interactions taking place online and offline. The majority of such data is concentrated in the hands of a few private companies and it is mainly exploited for commercial purposes. But, is this the only possible scenario? Policy people, activists and academics are raising the issue by investigating and promoting different data practices that foster a fairer digital society - in which data are leveraged for public good and enhance social justice.

In this paper, I examine how 'good data practices' could be tackled at the city level. Recently, urban public administrators are making arrangements with private IT companies and finding ways to gain access to citizens' privately held personal data (digital traces, GPS information, etc.). The underlying principle is that

privately held data with a public interest component should be treated as part of the urban infrastructure. Emerging data governance models, such as cities 'data trusts' and 'data commons', push this idea even further. Tools or frameworks are being developed to facilitate cities access to privately held data and the redistribution of its collective value (for instance by using it for societal purposes and increasing citizens' data ownership).

The empirical research presented in this paper investigates the concrete realities, as well as the imaginaries and discourses, of 'good data practices' at the city level. The paper will discuss the results of an ongoing study based on semi-structured interviews with local public administrations (especially chief technology officers, chief data officers, etc.) from a purposive sample of cities across Europe that are undertaking urban experiments and initiatives using citizens' personal data. The study explores what opportunities do cities administrators see into these new types of privately held personal data, the social issues tackled with these projects and initiatives, and the enablers and obstacles. The main high-level question concerns to what extent the value produced through datafication, and the power unbalances from which it is generated, could be redistributed through initiatives at the city level.

'Good' data, data justice and well-being

Public service media and fair data in the era of platforms

J. Hokka, K. Nikunen

Tampere University, Information technology and communication, Tampere, Finland

Content
The paper explores challenges of datafication in context of the European public service media (PSM) that have the remit to serve public interest with values such as equality, universal access and social solidarity. In the platformed environment, PSM have chosen to share content on social media, on Facebook and YouTube, also submitting to the power of technology giants, infiltrated in the everyday uses of social media in forms of surveillance and ownership of user-data (Sørensen and Van den Bulk 2018). After series of social media scandals related to leakages of user data and circulation of fake news, and pressures from EU legislation to enhance privacy (GDPR), PSM particularly in UK, Netherlands and Finland, have started to reconsider their strategies. They have initiated projects to explore alternative public platforms with fair data with other public institutions such as museums and libraries.
Based on ethnographic research in the Finnish PSM company YLE, this paper explores series of pilots on citizens experiences of datafication. As argued by Helen Kennedy (2018), debates of datafication often draw on the views of the elite and techno activists, however, 'it is important to take account of what non-expert citizens themselves say would enable them to live better with data'(Kennedy 2018). Moreover, as datafication may produce potentially discriminatory outcomes (Eubanks 2017), it is relevant to explore the variety of data experiences.
These pilots include workshops that help people, firstly, to investigate for what purposes and how their data is used. Secondly, they explore visions of what kind of 'fair' purposes for data collection there could be. On the third phase of pilots, the outcomes are made public and discussed through journalistic stories. In this way, the paper also explores how the process itself challenges PSM's own values and understanding of their data policy and practices of data gathering.

References:
Eubanks, V. (2017) Automating Inequality. New York: St. Martin's Press.
Kennedy, H. (2018) Living with Data: Aligning Data Studies and Data Activism Through a Focus on Everyday Experiences of Datafication. Krisis : Journal for Contemporary Philosophy (1).
Sørensen, J.K. & Van den Bulck, H. (2018) 'Public Service Media Online, Advertising and the Third-Party User Data Business: A Trade versus Trust Dilemma?', Convergence, The International Journal of Research into New Media Technologies, Online first: 1–25.

'Good' data, data justice and well-being

Data savvy or data safe? The difficulty of supporting children's critical data literacies

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[1]Deakin University, Faculty of Arts and Education, Melbourne, Australia, [2]Monash University, Faculty of Education, Melbourne, Australia

Content

Amidst growing concerns over data in/securities, it is increasingly falling to schools to support children's agentic engagement with digital data. Based on research with 207 Australian students (aged 9 to 11 years), this paper explores the difficulties of developing critical data literacies in children who are only just beginning to make use of online services.

In theory, these digital neophytes have yet to become inured to the continuous 'trade-offs' implicit in engaging with digital platforms. Yet rather than being receptive to critical data literacies, our research highlighted a strong tendency for children to focus on dealing individually with what they perceived as immediate 'dangers' (including identity theft, grooming and cyberbullying). This often made it difficult to develop more nuanced understandings of data tracking and profiling.

We explore this phenomenon in two ways. First, is what Hintz et al. (2019) term the 'actively manufactured' general standards and design of digital platforms that make it difficult to think and act differently with regard to personal data. Second, is these children's already extensive exposure to 'cyber-safety' education, which tends to emphasise that being 'safe' online means only sharing personal information with people they know.

To support critical engagement with digital data, we conclude with recommendations for how researchers, educators and designers might encourage young people to build positive relationships with 'good' data while at the same time maintaining their privacy.

Reference:
Hintz, A. et al. (2019). Digital Citizenship in a Datafied Society. Polity Press: UK.

Oral presentation

11:00 - 12:30   *SFG 1020*

Data activism, citizen engagement, indigenous data sovereignty and open data

Data activism, citizen engagement, indigenous data sovereignty and open data

Can Higher Education Teach for Data Citizenship?

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Content
The increasing 'datafication' of higher education appears to be grounded in instrumentalist and solutionist rationales that overlook key opportunities for critical engagement with contemporary digital technologies. Whether through attempts to measure the performance of the sector, the design of analytic dashboards intended to streamline teaching, or the production of software ostensibly capable of 'personalising' learning, various forms of 'datafication' are occurring in a broad range of higher education activity. However, these examples illustrate a framing of data-intensive digital technologies as tools for higher educational management, in which inner workings are largely concealed, outputs are assumed to be straightforwardly beneficial, and little scope is provided for critical reflection on the social, economic, and political implications of 'datafied' teaching and learning practices.

This paper will suggest alternative visions for 'datafication' in higher education teaching; concerned, not with the institutional application of veiled 'data science' techniques for the purposes of 'enhancing' existing teaching and learning practices or making sector processes more efficient, but rather with centring and exposing data-intensive technologies as a pedagogical concern, and as an essential part of developing future citizens. Three areas of literature will be drawn upon. Firstly, 'citizenship education', which has tended to focus on the right and responsibilities, as well as the role of the institution (for critical perspectives see Nicoll et al. 2013). While this work has tended to overlook explicit discussions of technology, sociological work on 'digital citizenship' has engaged more directly with the performing citizenship in 'digitised' and non-institutional contexts (e.g. Isin and Ruppert 2015). These critical understandings of citizenship will be contrasted with recent calls for higher education teaching to be recast as the training of 'creative, problem-solving entrepreneurs' (Knox, forthcoming 2019) in response to increasing machine intelligence (see Aoun 2017). Such a view will be suggested to depoliticise the educational process, and cast the social world in terms of narrow sets of technical fixes that limit the intellectual capacity of students. This paper will conclude with suggestions for alternative approaches to higher education teaching that can align with more critical approaches to performative citizenship in an era of 'datafication'.

References
 [1] Aoun, J.E. , (2017), Robot-Proof: Higher Education in the Age of Artificial Intelligence, Cambridge; MIT Press
 [2] Isin, E. & Ruppert, E. , (2015), Being Digital Citizens, Rowman and Littlefield: London
 [3] Knox, J. , (2019), (forthcoming 2019) The 'Creative, Problem-Solving Entrepreneur': alternative futures for education in the age of machine learning? , In M. Peters, P. Jandrić, & A. Means (eds.) Education and Technological Unemployment, Springer.
 [4] Nicoll, K., Fejes, A., Olson, M., Dahlstedt, M. & Biesta, G. , (2013), Opening discourses of citizenship education: a theorization with Foucault., Journal of Education Policy, pp.828-846, 28(6)

Data activism, citizen engagement, indigenous data sovereignty and open data

Critical Big Data Literacy Tools – Engaging Citizens and Promoting Responsible Internet Usage

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Content

In our datafied societies, there is a pressing need for an *informed public debate* about the impacts of data science technologies. However, internet users are often unaware of the potential consequences of disclosing personal data online and few citizens have the knowledge to participate in such debates. My study suggests addressing this lack of knowledge through *critical big data literacy*. In this paper I present findings from a cross-national study of online data literacy tools. The study involved mapping English- and German-language critical big data literacy efforts, analysing their strengths and limitations, and investigating their influence on people's privacy attitudes and behaviour through pre and post use testing.

Through the mapping and analysis I argue that there is much *variety* among the critical big data literacy tools available, which have been created by a range of *diverse actors*. The 38 identified tools apply 15 different design approaches, including unusual and unexpected formats. My analysis of user engagement shows that the tools tested did lead to *improved critical big data literacy* with my participants, which resulted in *more privacy-sensitive attitudes* and *internet usage*. This study *reaffirms the importance* of critical big data literacy and complicates the notion of *resignation* towards privacy.

The exploratory multi-methods approach employed in this research proved insightful and produced new findings about the value of interactive data literacy tools. This research shows that these not previously researched tools provide a significant means to work toward empowering internet users, promoting responsible internet usage and ideally enabling more citizens to engage in public debates about changing data systems.

Data activism, citizen engagement, indigenous data sovereignty and open data

Manifest Destiny? Critically Engaging Mobile Data Permissions

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Content

This paper will draw on a series of funded research projects that have developed new tools and methods to understand how data ecosystems can be decolonised. I will focus on our current participatory research project with the Berlin-based Tactical Tech collective. Together we have created two data literacy workshops that unpack the mobile application environment scheduled to run at their Glass Room: a deconstructed tech store installation, in San Francisco, in May 2019. We seek to strengthen civic engagement around the role of Android manifest permissions so that users have a greater capacity to discern why some apps are inherently 'leakier' then others.

Given that manifest permissions allow applications to request sensitive data from users, I will argue they are essential building blocks for datafication on mobile devices and offer a unique way of examining the 'black boxed environments' that perpetuate the flow and capture of our social data. I will present our finding, which asks if users might interact with their apps differently when provided with A) context around what android permissions are and how they contribute to datafication and B) provide access to the manifests of different applications they might use (found in the 'Manifest Destiny' database we have created, which now holds over 1000 different manifest permissions). In short, can these android manifests and permissions bring about

another way to critically evaluate the leakiness of our apps and thereby more agency and possibility for critical data engagement?

Data activism, citizen engagement, indigenous data sovereignty and open data

The hidden, meta- and anti-affordances of data activism: a discursive-material analysis of how data activists contest the power of social media

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[2]*University of Cyprus, Department of Social and Political Sciences, Nicosia, Cyprus*

Content
The article combines the study of data activism and affordance theory to explore the discursive and technological mechanisms by which data activism projects strive to empower users of corporate social media vis-à-vis data power. The analysis uncovers the core discourses and practices of data activists, showing how they expose the fallacies of existing systems centred around datafication and endorse oppositional use positions, either by providing a counter-hegemonic 'reading' of social media or by facilitating user actions that can modify designed affordances and encompass a subversive potential. By enabling hidden affordances of corporate social media and creating new, meta- and anti-affordances, data activism projects attempt to empower 'ordinary' users to reflexively modify their behaviour online and affect the very algorithms that produce them as datafied subjects. The article concludes with a critical discussion of data activism as a means of vernacular critical praxis. Overall, the paper offers a novel typology of oppositional affordances to understand the materiality of "critical software" and its subversive potential for ordinary users.

Data activism, citizen engagement, indigenous data sovereignty and open data

Citizen engagement with superior audit institutions: the possibilities of citizen generated data

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Content
Superior Audit Institutions (SAI) oversee fiscal activities and the compliance of other government agencies. As independent bodies, their accounts provide key information in tackling corruption (OECD 2018). In past decades citizen-led 'social audits' or 'ground-truthing' were developed to propose alternative ways of evaluating, and to close 'accountability gaps'.

Recently, some SAIs started to invite citizens to participate in auditing. Throughout Latin America, for example, different mechanisms allow citizens to join SAIs by suggesting specific audits, making particular complaints about suspected violations, joining the yearly planning of audits to be conducted, or following-up the recommendations produced by the SAI.

Despite substantive attention to the practices of social audits, little attention is paid to how these practices relate to traditional auditing. Literature suggests different conditions enabling cooperation or take-up of citizen-generated data by government (McElfish, Pendergrass, Fox 2016). Instead of regarding citizen data as mere resource, authors emphasise that data-intensive citizen-state cooperation must inquire the politics defining what can be known and audited (Oettinger 2009). The paper builds on these debates asking:

What conventions and standards do Superior Audit Institutions develop to engage with traditional and non-traditional types of data?
How do these conventions and standards interplay with the practices of citizen auditing?

This paper presents literature and empirical cases of SAI-citizen cooperation to explore the role that CDG could play within collaborative audits between civil society and governmental institutions. I focus particularly on how agreed practices of CDG interplay with the standards that SAIs establish to secure the robustness of their audits.

Oral presentation

11:00 - 12:30   SFG 1030

Big data and humanitarianism vs. corruption and public debt

Big data and humanitarianism vs. corruption and public debt

The impact of digital humanitarians on major crisis stakeholders and the politics of crises

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Content

Digital technologies and big data are rapidly transforming humanitarian crisis response. This paper looks at a particular aspect of this transformation – the appearance of digital volunteer networks, or digital humanitarians – and explores their impact on the established interrelationships between major crisis stakeholders, such as governments, humanitarian agencies, media, and affected publics. Digital humanitarians are online communities who collect, verify, translate and map information about crises across various digital channels in order to aid the relief efforts. They present a distinctly new source of information in crises, which is crowdsourced and is widely believed to give voice to the affected communities but at the same time can (re)produce societal inequalities.

I draw on original interviews with humanitarian organisations, journalists, and digital humanitarians themselves about their understanding of the recent digital transformations. I demonstrate how, through a unique combination of speed and safe access from a distance, digital humanitarians find themselves outside the traditional politics and economy of crises. They can escape some of the political pressures and access restrictions of most formal humanitarian and media agencies, challenge the roles of central governments during crises, avoid the dependence of many aid organisations on media exposure for funding, and offer alternatives to the stereotypically passive media representations of affected communities. At the same time, digital humanitarians come to experience multiple challenges and pressures of their own. This paper explores how major crisis stakeholders can find both challenges and opportunities in the new humanitarian environment where boundaries between media and aid organisations, digital humanitarians and the formal humanitarian response, and the affected communities as victims or active agents in crisis response become increasingly blurred.

Big data and humanitarianism vs. corruption and public debt

A critical look toward Big Data research in Social Sciences: a survey on Big Data & Society

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State University of Campinas (Unicamp) - Brazil, Laboratory of Advanced Studies in Journalism (Labjor), Campinas, Brazil

Content

What is Big Data for social scientists? How this multidisciplinary science field articulates its Big Data narratives? Which are its trends, speech places and basic assumptions? This paper seeks to address these questions by doing an overview on Big Data studies within the Social Sciences field. Due to the size and

challenge of such an enterprise, this work takes as its investigation scope the first six issues of the scientific publication Big Data & Society, a precursor on the promotion of Big Data research among social scientists. The paper is the result of an analytical mapping covering 131 articles from the Big Data & Society database. The mapping presents an overview on the main methodologies, keywords, references, thematical sections and citations plus the geopolitical configuration of the articles published during the 2014-2016 time frame. This paper seeks to carry those data further by assessing critically the different paths to with Big Data research in Social Sciences have been following over the last few years. Some of the findings point out to an euroamerican academic concentration and a decisive STS framework influence on Big Data research. Our goal is to offer critical insights for future Big Data research among social scientists. The paper initially adresses the concept of Big Data, synthesizing the debates around it over the last few years through a literature review. Then it briefly explicits the main reasons for choosing Big Data & Society as the study object of this work, addressing the methodological processes and the initial details of the analytical mapping done in the publication as well. The paper then finishes situating research paths on the Big Data research in Social Sciences, offering questions on the attempt to potentialize investigations in the Big Data-Social Sciences interface. This research made use of a quali-quantitative analysis strategy. The analytical mapping was carried through by a process of defining the main categories to be analyzed and a manual effort in collecting and classifying all the data from the 131 articles.

Big data and humanitarianism vs. corruption and public debt

Sustainable AI Development (SAID)

C. Djeffal

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Content
How do we deal with in/securities in data driven machine learning algorithms? This paper argues that we need to rethink the framing of artificial intelligence (AI) today. To spark the discussion, it offers a new and inclusive frame in order to discuss in/securities and AI: sustainable AI development (SAID). In academic discourse, data driven machine learning algorithms are mostly reflected on from ethical, legal, political, or economic points of view. From these perspectives, AI in/securities are i.a. conceived as threats to human rights, economic risks, and problems of transparency. While each perspective reveals interesting aspects, there is hardly any discussion about how to frame AI in academic debate. Building upon insights from Science and Technology Studies, I will provide for comparisons of frames in the context of other technologies.
The paper will argue for discussing AI in the context of sustainable development. It will show that sustainable development can offer a comprehensive frame for AI. It will highlight the inclusiveness of this frame, addressing human rights, minority rights and collective rights at the same time. It will also show how sustainable development puts great emphasis on justice and supports the discourse on data justice. This applies in particular to debates about artificial intelligence in the development context. The paper will also assess SAID from the standpoint of critical approaches to sustainable development. It will conclude by summarizing what SAID as an alternative frame could add to current academic debates.

Big data and humanitarianism vs. corruption and public debt

Designing Security Across Boundaries: mapping disperse data to collaboratively situate crises

K. Petersen

Trilateral Research, London, United Kingdom

Content
Crises, along with their safety and security needs, are increasingly made sense of using maps and common

information spaces built upon new technologies that compile data from a range of sources. This paper explores how these collaborative data tools work when managing transboundary crises, where planners and responders have to engage with data from other organisations, based in different data frameworks, socio-political priorities, goals, and cultures of risk. Drawing on the societal and ethical analysis of transboundary collaborative crisis information platform developed in the 3-year long European Commission funded IN-PREP project (in-prep.eu), this paper examines the assumptions that emerge in designing information technology and their infrastructures to support cross-border data sharing for preparedness and disaster management. Based on qualitative stakeholder consultations that describe and map data flows within the design ideas and technical solutions, assess social norms, legal frameworks, and ethical considerations, this paper aims to better understand the ethical debates about who has the authority or responsibility to define a crisis and which security measures are justified. Specifically, this paper discusses how different understandings of risk become codified into the data frameworks and identifies the emergent social and political tensions that can form as a result. It looks at how the tension between the understandings of risk being built into the tools can have a range of implications from how accuracy and relevancy of information is defined, to increasing the exclusion of already marginalised understandings of risk, to specific conceptions of responsibility and caring for those at risk.

Big data and humanitarianism vs. corruption and public debt

Ontologies Enacting Alterity

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Content
Schemas, graphs and ontologies can enact social actors in politically sensitive ways. This is clearly revealed when such formal knowledge representations are used to establish intended identities of non-citizens. As part of the ERC-funded "Processing Citizenship" project, this paper presents the results of the semantic analysis of ontologies of information systems used to identify and register migrants in Europe.

By launching the "hotspot approach" in 2015, the European Commission has identified the use of information systems as an important element to de facto achieve a joint migration policy and to gain knowledge on non-EU citizens. However, differences (and similarities) exist among members states' systems, as well as between member states' and Europe-wide systems. At European level this is especially relevant as information systems are undergoing major changes following several proposals to make them semantically interoperable, and make their data more usable for EU policy-making. How are migrants enacted by information systems designed for different purposes by different institutional actors? What consequences are entailed by their ongoing integration?

Our paper will present how we extracted identity ontologies from technical, design, legislative, and other types of documents. This allows us to process them using novel visualization methods, highlighting the otherwise less visible work of knowledge production. We introduce this novel method and the first results from our comparative analysis of the current operational information system at European level and from Greece. The results from this analysis will contribute to STS scholarship with a new method based on the empirical analysis of ontologies.

Emerging in/securities through algorithms and automated decision-making

Emerging in/securities through algorithms and automated decision-making

Algorithmic Governmentality, Identity and Political Speech

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Content
Commercial circuits of personal data participate in the individuation of an algorithmic governmentality, that is to say that it induces power relationships, truths and dynamics of subjectification. We can ponder if we are really in the transition from discipline to control. On the one hand, with the velocity and social acceleration associated with Big Data, the subject is more reactive than reflective and confined to the time bubble of « real time » by a-signifying and machinics semiotics. Thus, the subjects become deleuzian "dividuals", simple relays to the general functionality of the data merchandising circuit. Another source of control is the assumption that the immediacy of real time is also pretending to "im-mediate" (no mediation): the "real" is thus achieved without intersubjectivity, the Big Data is posing as an objective synthesis of the individual values reduced to the behaviors of the subjects ("raw" data). Faced with the "real", no compromise possible: aesthetic-ideological-political forms are reduced to the status of personal choice; any opposition is no longer praxis, but rather embodies a form of yoke face to which we must emancipate.

Increasingly, the political discourses on the digital media are automated, in terms of production as well as those of distribution and consumption. Thus, the focus on the debates and purposes tends to be replaced by a micro-mapping of individual behaviors often far removed from the values of civic engagement and which confine the subjects in their dynamics of personalization (echo chamber) (Jacobson, Myung and Johnson, 2016). The "digital" public space must now cope with the proliferation of opinions, rumors and false news(Shorey, 2016). One of the crucial points is the profiling used by the algorithms for linking speeches and voters. However, the study of these algorithms faces several challenges (Bodo, B., Helberger, N. and All., 2017): the technical opacity of the algorithms themselves (Kitchen 2014) which are also seen as a competitive advantage therefore to keep secret (Pasquale, 2015); socionumeric platforms that claim to be open forums for discussion, but which are in fact governed by rules of use legitimized by private property (Nissenbaum 2009). We will use this paper to discuss a pilot project around the analysis of the use of algorithms in the distribution of political speeches in the upcoming Canadian elections (October 2019) to receive comments and suggestions to this effect.

Emerging in/securities through algorithms and automated decision-making

Data-Fuelled In/Securities in the "Safe City": How Big-Data Policing Is Spreading Across France

F. Tréguer

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Content

Passed by local authorities in the name of the "Smart City" -- i.e. urban management techniques enabled by the development of digital technologies --, "Safe City" programs are fast spreading across France's urban areas.

To date, these programs consist in large-scale experiments where French companies from the defence sector or specialised in the operation of network infrastructures but also global competitors like Huawei and Cisco, can crash-test their "Smart City" solutions with the support of local authorities. In practice, public funds allocated to real-world "Smart City" applications remain largely confined to policing and the management of in/securities. The "Smart City" thus becomes the "safe" or "securitised city".

The presentation starts by retracing the origin of these developments. We untangle the complex network of public and private actors pushing and funding these programs.

We then survey some of the key technologies underlying current "Safe City" programs and their alleged objectives. Among those, we focus in particular Big-Data-powered statistics on crime and predictive policing, automatic analysis of video-streams from CCTV cameras (including facial recognition and detection of suspicious behaviours), as well as the monitoring of open source databases such as online social media.

After looking at some of the legitimation discourses used by the promoters of these programs and their strategies to shield them from public scrutiny, we stress the legal and policy limbo in which they develop, and the failure of oversight bodies to alleviate the obvious risks that they raise.

Taking a step back, the presentation also inscribes these recent developments in the global trend towards the automation of decision-making in the management of in/securities, while locating the project of the "Smart City" in the longer-term history of policing of urban polities.

We conclude by providing an overview of a participatory research-action project to be launched in Spring 2019 and involving academics, activists and journalists to document and resist the advent of the "Safe City".

Emerging in/securities through algorithms and automated decision-making

Voice as Silencing: Algorithmic Visibility, Recognition Costs and the Rise of Ordinary Authoritarian Voices in Brazil

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Content
In light of the global resurgence and consolidation of undemocratic social movements and governments, scholars have started to think of the relationship between datafication and authoritarianism.

They have discussed how states can use dataveillance and advanced machine learning to engender social conformity and persecute opponents; have investigated the ways in which leaders and propagandists employ datafied platforms' direct speech and targeting techniques to sow confusion and hate; and have looked into how far-right micro-celebrities exploit the 'attention economy' to radicalize its audiences.

In dialogue with these concerns, this paper explores the relationship between datafication and authoritarianism, but at the level of 'ordinary' citizens – i.e., individuals who are not part of political organisations and do not see themselves as 'activists'.

Its empirical context is the Brazilian political crisis. It has began in 2013, with massive democratic protests against a corrupt political elite, and evolved in 2018 into an unprecedented support for violent illiberalism, embodied in the figure of the country's new president, Jair Bolsonaro.

Drawing on social practice and recognition theory to analyse 47 in-depth interviews with "ordinary" Facebook Brazilian users, the paper argues that these users' imaginaries of the platform's algorithmic visibility regime may give rise to a new form of civic disrespect. I name it 'recognition costs'. It involves the conscious

necessity by users to act disrespectfully toward themselves (through e.g., self-obfuscation and self-silencing) and others (through, e.g., offensive, simplified and opportunistic political discourse) to control their visibility and the likelihood of having their voice recognised and/or not misrecognised. Being heard on Facebook, they think, entails multiple forms of silencing.

All interviewees reported adjusting their Facebook presence to these visibility rules, the paper demonstrates. As a result, they end up articulating civic voices that carry, to a greater or lesser degree, elements of authoritarianism – most of them, without even realising that their civic practices are antithetical to the democratic ethos. Worryingly, users from economic, racial and ideological minorities appeared to be more susceptible to these pressures.

The paper ends with a pessimistic reflection on the possibility of resisting this order, and on how 'recognition costs' may (and may not) illuminate the Brazilian crisis.

Emerging in/securities through algorithms and automated decision-making

Security Algorithms and Securitized Subjects: Perspectives of Data Experts and Refugees

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Content
Big data and algorithms continue to penetrate our lives in every domain creating a further level of inequality and insecurity, and the field of security is no exception. The literature on security algorithms is generally theoretical. This study employs a qualitative in-depth interview method and compares the perspectives of data experts and refugees on the use of algorithms for security purposes. In the study, data experts represent a group that utilizes data and algorithmic solutions, whereas refugees represent a disadvantaged mobile group that is more likely to be targeted by security algorithms. The data analysis based on interviews conducted with data experts (24) in Estonia and Syrian refugees (19) in Estonia and Turkey demonstrates that while some refugees prioritize security over data privacy, some distrust a non-human system and do not believe it would be fair and accurate in predicting criminal behavior. Data experts perceive algorithms as a positive technological innovation yet they are cautious about the ethics of using such systems in decision-making processes. Both refugees and data experts underline the importance of human agency in algorithmic systems and potential dangers of trusting big data and algorithms too much. The study provides perspectives of data experts and data subjects on algorithms for security with a focus on emerging insecurities and the role of human agency in algorithmic systems.
Keywords: Security algorithms, refugees, big data, algorithmic governance, predictive policing.

Data journalism and rhetorics of data visualization in a global perspective

Data journalism and rhetorics of data visualization in a global perspective

Data retention, journalist freedoms and whistleblowers in the Middle East

M. AlAshry

Mass communication Ain Shams, Journalism, Egypt, Egypt

Content
As members of the 'fourth estate', journalists have enjoyed certain limited protections for themselves and their sources under the laws of various in the Middle East countries. These protections are now uniquely challenged in the context of metadata retention and enhanced surveillance and national security protections. This study examines the recent changes to laws in Egypt, Libya and Tunisia through a sample questionnaire of 50 journalists as investigative watchdogs. It considers the nature of the new laws, the responses of journalists, the broader context of corruption issues journalism, and the role of the 'networked fourth estate' and non-institutional actors in creating accountable government in Middle East.

Data journalism and rhetorics of data visualization in a global perspective

Approaching data visualisations as interfaces: An empirical demonstration of how data are imag(in)ed

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Content
This contribution points out data visualisation's double role as explorative and communicative means in humanities research. We draw from science and technology studies and feminist perspectives looking at the mediation process at stake: the interaction between visualisation tool and researcher. To emphasize this mediation process and expose the various decisions at its heart we introduce the term 'data interface'. We highlight how visualisations function as data interfaces and visualisation practices allow for interfacing with data by biographing a network graph's 'life'.
Using the lens of the 'data interface' underscores that a particular (network) visualisation provides just one perspective on the data. In other words, we highlight not only the way in which visualisation functions as a means to interface with data, but more importantly, also expose and emphasize the myriad of choices and selections which lay at the heart of this epistemic process. By doing so, we seek to rethink interfaces and their design in a way more applicable to the complex making processes in which data visualisations are constructed, and thus, knowledge is produced. Moreover, we examine if and how the used data interface(s) encourage scholars to critically position their investigative work. That is whether or not these 'programmed visions' tempt the viewer to question their politics, during the research processes and the communication of research outcomes.

Data journalism and rhetorics of data visualization in a global perspective

Global, collaborative and data-driven: How the normalization of leaking shaped the identity and practice of investigative journalism

S. Baack

Mozilla Foundation, Berlin, Germany

Content
From the Panama Papers to the CumEx-Files, we appear to witness a 'Golden Age of global muckraking'. While cross-border collaborations among journalists are not new, data technologies have dramatically increased their scale and degree of collaboration. Transnational collaborations among journalists are increasingly data-driven operations specialized on facilitating the analysis of huge leaks. In a more dynamic media environment, where traditional identities and routines are being challenged, 'data-driven' transnational networks help to articulate global standards of investigative journalism and shape journalism's response to an increasingly globalized, interdependent, and datafied world.

This paper shows how data-driven journalism networks today are shaped by the ways in which journalists normalized leaking in technological, organizational, and cultural ways since Wikileaks' publication of the Afghan war logs. The result has been a) the establishment – or evolution – of national and transnational structures that facilitate collaborations; and b) that the concept of 'leaking' was moved away from radical transparency advocacy, and into traditional journalistic ethics and identities. The subsequent normalization of leaking is relevant beyond leaking itself, as it more broadly shaped practices around 'data-driven cross-border collaboration'. This means that the practices, organizational structures and technologies developed around leaking are also relevant for collaborative data collection or data sharing projects. To examine whether and how evolving data-driven journalism networks are adequate responses to global data power, I will conclude with suggesting that media and journalism studies needs to rely more on theories of transcultural communication and methodological frameworks that do justice to the transcultural nature of these phenomena.

Data journalism and rhetorics of data visualization in a global perspective

Data literacy among journalists: skills-assessment based approach

R. Kõuts-Klemm

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Content
The datafication brings with the challenges for journalists to fulfil their historical role as mediators and interpreters of social processes. The data literacy among journalists gets the central importance, since it enables to collect, evaluate, process and translate the new type of information (Hammond, 2017) – in the form of data into readable narratives for the wider public. Nevertheless, journalism has been rather a humanitarian field, where the journalists tell stories, but do not deal with analysing and interpreting of numbers. For the current study a methodological tool was developed to "measure" the data literacy among journalists in Estonia. The study develops the skills-assessment approach to the data journalism.
The results of the data literacy questionnaire in combination with semi-structured individual interviews indicate that journalists feel themselves more comfortable with data presented in familiar forms (similar to Cushion et al., 2016). Statistics or research data helps journalists in deepening their story context, but the critical attitude towards the ready-made data among journalists is rare. The numerical data are treated as factual information given by the respective bodies without further need for verification (similar to Simons et al., 2017, Stalph, 2017). In more optimistic manner the study confirms that the need for advanced levels in data literacy is acknowledged by journalists as a challenge for the future journalism.

Key words: data literacy, journalism, datafication, statistics, research data, skills

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Oral presentation

13:30 - 15:00   SFG 0150

Critical, theoretical and feminist approaches to data in/securities

Critical, theoretical and feminist approaches to data in/securities

'Staying with the trouble' of networks: five challenges in accounting for situated network practices

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Content
With the growing availability of digital data from a wide variety of sources, network analysis is gaining prominence as part of online visual cultures (Galloway, 2012), not only in research but also in fields such as journalism, advocacy, policy, and various online communities. But what kind of knowledge is produced and rendered visible through tools, practices and cultures associated with network-making? How can various actors make sense of the outcomes? How might we trace the fate of network graphs on the web? What kinds of publics are gathered and invited to make meaning with networks? How can network makers account for exploratory and interpretative work conducted with the tools? How can the various steps and forms of mediation involved in making networks be accounted for?
Based on our experience with developing and using methods and tools for exploratory network analysis, we formulate some central challenges for the process of making network visualizations public, and in doing so, accounting for one's network practices. Our study builds on and furthers approaches from STS (e.g. Latour & Woolgar, 1979), media studies (e.g. Schäfer & Van Es et al., 2017); and feminist perspectives (e.g. Haraway, 1993) on the production and distribution of knowledge. We broaden our own experiences with 'tool criticism' (Van Es et al., 2018) using empirical data that we collected during a workshop on network practices of diverse scholarly and journalistic practitioners as well as in associated field work and experiments. Drawing on a rich body of knowledge in the study of epistemic processes, our contribution addresses and makes inferences concerning the following areas of discussion: 1) making networks, 2) making accounts of making networks, 3) making sense of networks, 4) making networks public, and 5) making software for constructing networks.

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Critical, theoretical and feminist approaches to data in/securities

Provenance as a Mode of Inquiry into the Data of Everyday Life

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Content
In recent times, studying the web has become increasingly reliant on pre-existing digital data from a direct source (scraped or via API) or 'consumed' by researchers in some other 'value added' form (e.g. annotated, linked, mapped, aggregated). Although it may not be overtly labelled as such, those engaging in research that seeks to critique the dominant narratives forming around the concepts such as 'big' and 'open' data often work archaeologically and speculatively. In this paper, I argue that as traces of human behaviour, biology and thinking are becoming increasingly motile within internet logics and architectures, provenance - where a piece of data comes from, how it came into being and what processes it has been subjected to - is an important methodological consideration. A rigorous approach to provenance, I argue is not simply a methodological concern for those doing interdisciplinary research in the academy, but it contributes to necessary and timely exchanges between the academy, industry and governments about the tactical, jurisdictional and ethical implications of data driven practice more broadly. My contention is that in terms of their evidentiary affordances, datasets 'perform' in different ways. They perform representationally where the quality, context and fidelity are important to consider. They also perform empirically across the axes of space and time, individuals and populations, ascribe selfhood and otherness, the pathological and the normal and define interiority and exteriority relative to a range of subject-positions. My provocation is: how might we develop provenance-based approaches that can be brought to bear on the web as an object of analysis? Drawing on research that I have conducted into the use of sensor-enabled self-tracking technology and its relation to the work/life boundary I show how the specificities of embodied data capturing technologies can subvert the logic of the technical systems used to make inferences from data. An expanded notion of data provenance, I argue, builds on work already going on in the field of media archaeology, adding a dialectical dimension to its materialism which addresses some of the ambiguity around how to approach data 'archaeologically' especially given the complexities in applying concepts like history and genealogy to data when it is produced in near real time, and at velocity and scale.

Critical, theoretical and feminist approaches to data in/securities

IS Personal Data a Personality Right? Analysis based on Legislation and Justice in China

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Content
After the rapid development of ICTs in the past few decades, Internet has become the infrastructure of social life; information and data have become the basic means of production which is called "digital oil" for its importance like material energy.
In the digital economy, human are both consumers and producers of information. Therefore, information related to individuals becomes the most valuable "digital oil". People's online activities, including conscious information activities and unconscious information activities (such as "digital footprint", "behavioral traces"), are not only communication practice, but also information "productive" activities.
As an important means of production, the value of data can only be realized when information flows freely and sufficiently; and the sharing and interconnection of data become basic needs for digital economy and public management. Therefore, enterprises and governments are all converted into Leviathan who is eager for data. However, the current global legislative trend to protect personal information tends to limit the collection, mining, use and free flow of personal information. Thus, conflict comes up.
"Right to self-determination of information" generally means whoever collects or processes personal data need to inform the people whose personal data are collected and get their permission. But when users click the "agree" button, which can be regarded as "informed" and "consent", their agreement usually means "give up" their right to personal information. Therefore, it is not exact to say individuals have no "right to self-

determination" for their personal information because they are entitled to choose whether to "agree" or not, actually, what they lack is "bargaining power".

Besides, by analyzing China's legislation approach of personal data and investigating how it was executed in the justice, this paper points out that the Internet and the digital economy did not create new personality rights, but brought new risks to the traditional rights. The purpose of protecting personal information is not to remedy personality rights, but to prevent possible risk to traditional rights and security.

Therefore, in the digital economy and platform-based society, meticulous design of regulatory system is needed, and multiple attributes of personal data should be well considered in legislation, so as to make individuals enjoy equal status with ISPs and governments on personal data.

Critical, theoretical and feminist approaches to data in/securities

The datafied home: The adoption of voice assistants in private settings

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Content

Voice assistants - or smart speakers - are technologies that process voice commands and execute them according to their capabilities. They can be defined as "software agents that can interpret human speech and respond via synthesized voices" (Hoys, 2018). Due to the fact that these VAs are located in people's homes, voice assistants pose a severe risk for privacy breaches, data collection, and surveillance (Lau et al. 2018). With the aim to shed light on the ways why and how individuals adopt these technologies into their homes, we conducted a set of studies in order to assess indivuals's overall attutides, usage patterns, and daily routines with a selected brand of smart speakers (Alexa).

Following the model of the 'domestication of technology' approach we conducted three studies:
• Study (1): Online survey (n=408) on user attitudes in respect of practicability, acceptance, data safety, surveillance, and privacy
• Study (2): Case study with users' media diaries on daily practices in the home (10 households)
• Study (3): Cooking with Alexa (one selected cooking skill with 5 participants)

Results of the questionaire showed a majority of participants to be datat sensitive and sceptical of these new devides. The same was true for the the ethnografic study, in which users filled out media diaries for three days. However, this study in combination with the cooking study showed that most participants limited their activities in the beginning only, but soon adopted the technology fully into their lives. Some even regarded Alexa as a companion.

Consequences for attitudes towards datafication of the home will be discussed, and some regulatory measures will be suggested.

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Oral presentation

13:30 - 15:00   SFG 1010

'Good' data, data justice and well-being

'Good' data, data justice and well-being

Good data for health literacy and digital inclusion

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Content
The adoption of personalised digital health environments (e.g. self-management mobile apps), big data (e.g. surveillance of infectious outbreaks) and AI algorithms that inform decisions about social and health care (e.g. IBM Watson Health for social care management) all raise important issues about data and privacy today. Meanwhile, health promotion and communication has also moved to a digitised era, with health organisations using texts and social media in order to educate about health risks and prevention (Lupton 2015). There is great potential in data analysis and visualisations to engage citizens in actionable change and to affect policy and law (Jasanoff 2017), while data representations can help stakeholders to comprehend large amounts of data and to identify patterns. However, so far there is no implementation of 'good' data use in public health initiatives or in community-based initiatives that aim at health literacy for marginalised populations.

This paper reports on work in progress of a project that offers a systematic approach to how data can be used for cultural participation and digital inclusion for health and wellbeing, through community-based participatory forms, to account for ethical, social, political and cultural issues in the era of big data and personalised medicine. First it reviews critically a) existing innovative communication tools, technologies and strategies used in health communication and marketing, and b) art-based participatory projects on health and wellbeing, and the theoretical literature relating to health promotion and communication, with focus on policy issues and practice that relate to health data and digital health technologies. Drawing from this review, the paper develops a theoretical framework that that a) applies key concepts from media and cultural studies and the sociology of media (e.g. active audiences, domestication of technologies in everyday life, mediatization), and critical data studies (e.g. datafication, critical data literacy) in the study of public health and health promotion, and b) identifies the ethical, social, cultural and political issues of a data-driven, art-centric strategy in health communication.

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'Good' data, data justice and well-being

Complex ecologies of trust in public views on personal data mining

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Content
In times of data power, trust is increasingly important and elusive. In the UK, a flurry of surveys and polls assessing who the public trusts with personal data have surfaced in recent years (for example, ODI 2018 and Healthwatch England 2018). At the same time, trust is the focus of numerous events, targeted at the technology sector, policy-makers and academic researchers (for example Data For Policy and the 2019 AOIR conference). Trust also emerged as an important theme in our research into how users feel about the mining of their personal data, on a project called Signing In, which took as a case study the BBC's uses of the data it gathers from its recently introduced requirement that users sign in to access some digital services.

We found that attitudes to the mining of personal data relate to how much people trust the organisation doing the data mining. This has little to do with the organisation's data practices and more to do with feelings about the organisation's broader integrity. At the same time, anxiety about the safety of the online world in general limited participants' trust in BBC data practices, regardless of feelings about this organisation. High levels of trust in the organisation doing the data mining don't necessarily equate to trust in its data practices, because of knowledge and feelings about wider data insecurity. In the paper, we reflect on how these findings disrupt assumptions in relation to what constitute 'good' data practices.

'Good' data, data justice and well-being

Making Data Justice Work: Operationalizing Data Justice in Information Systems through Legal and Feminist Perspectives

C. Draude[1], G. Hornung[2], G. Klumbyte[1], S. Wyderka[2]

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Content
"Data justice" as a paradigm encompasses but also supersedes legal issues of data ownership and privacy regulations to account for complex power imbalances and injustices that are brought about by big data collection and use (Taylor 2017). Concerns about privacy, under-representation or over-surveillance have been raised by feminists, LGBTQI communities and people of color (Shephard, 2016, 2018, Weinberg 20117). Feminist legal scholar Crenshaw (1989) prominently pointed out that the intersection of categories such as race, class, gender produces multiple forms of discrimination.
We propose to interrogate the notion of "data justice" from an interdisciplinary angle between legal and feminist research. Furthermore, we are interested in how the concept can be integrated in information systems design. In the absence of a fixed legal concept of data justice, its specific content could be identified at the intersection of privacy (or informational self-determination) and equal rights. We will propose such a normative concept against the background of ongoing discussions on concepts of data ownership and data sovereignty. Data justice also has to address collective issues of privacy, which are still largely ignored as regards both collective privacy claims and the discriminatory power of big anonymous data. On this basis, we will ask what kind of conceptual and design models are needed to operationalize data justice. Throughout the paper we will show how bringing feminist, computing design and legal perspectives together might yield fruitful critical approaches to implementing more just data-driven computational systems.

'Good' data, data justice and well-being

Data Mining Methods in Data Activism: The Good, the Bad and the Beauty of 'Good Enough Data'

M. Gutierrez

University of Deusto, Communication, San Sebastian, Spain

Content

Drawing on the concept of 'good enough data,' which Gabrys, Pritchard and Barratt (2016) apply to citizen data collected via sensors this article looks critically at data in 'proactive data activism,' understood as a social practice that uses the data infrastructure politically and proactively to foster social change (Milan and Gutierrez 2015). It examines how data are generated and employed in data activism, expanding and applying the term 'good enough data' beyond citizen sensing and the environment. This analysis derives from a taxonomy of activists based on how they go about obtaining data (Gutierrez 2018a). It offers too an unsentimental view on the failures, contradictions and opportunities of data activism regarding the collection, analysis and communication of data (Hogan and Roberts 2015; Gutiérrez 2018; Palmer 2014; Vota 2012). The analysis employs Syrian Archive –an organization that curates and documents data related to the Syrian conflict for activism— as a pivotal case to look at the new standards applied to data gathering and verification in data activism from the South, as well as their challenges, so data become 'good enough' to produce reliable evidence for social change. Data were obtained too thorough in-depth interviews, fieldwork and empirical observation.

Keywords: evidence, data activism, good data, citizen sensing, crowdsourcing, big data, human rights

Oral presentation

13:30 - 15:00   SFG 1020

Data activism, citizen engagement, indigenous data sovereignty and open data

Data activism, citizen engagement, indigenous data sovereignty and open data

Artificial Intelligence for Education in China: political power and international influence

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Content
This paper will examine recent developments in China as an important means of understanding the political contexts that are shaping the rise of artificial intelligence (AI) for education internationally. Alongside high-profile interest in Chinese AI in general (e.g. Mubayi et al. 2017), specific educational examples are garnering attention (e.g. the 'magic mirror' [or 'Mo Jing'] involving facial recognition, developed by the prominent TAL Education Group. However, it is not only the design and functioning of these technologies that requires critical attention, but also the political context in which they are deployed. China's intention to position itself as the global leader in AI development is unmistakable, with the recent publishing of the Next Generation Artificial Intelligence Development Plan (State Council 2017), and more pertinently, the Higher Education Artificial Intelligence Innovation Action Plan (Ministry of Education 2018). outlining a grand vision for establishing the 'world's major AI innovation centre' by 2030.

This paper will focus on two key issues. Firstly, the political context of centralised state-endorsement (combined with private sector investment) that drives AI development in China, allowing systems to be deployed and coordinated on a vast scale, and providing largely unfettered access to the educational data required to train machine learning software. However, the potential advantages ('regulation' is often portrayed as endangering AI development in the 'West'), come at the price of increased surveillance and 'data exploitation'. Secondly, an increasingly international sphere of influence, where Chinese organisations are partnering with prestigious institutions (e.g. the TAL Education Group's relationship with Stanford University – see Lee 2018), and exporting broad AI strategies to other nation states (e.g. the 'strategic cooperation' between YunCong Technology and the Zimbabwean government – see Zhang 2018). This prominent political economy of educational AI development, and the ways it is tied to the technical functioning of machine learning systems and their demand for 'big-data populations', is key to understanding how this technology is gaining traction in education internationally, and who ultimately benefits, or is disadvantaged, in the process.

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Data activism, citizen engagement, indigenous data sovereignty and open data

Towards Democratic Auditing: Civic Participation in the Scoring Society

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Content

Citizens are increasingly assessed, profiled, categorized and 'scored' according to data assemblages, their future behavior is predicted through data processing, and services are allocated accordingly. State-citizen relations become quasi-automated and dependent on algorithmic decision-making. This raises significant challenges for democratic processes, active citizenship and public participation. This paper will explore how citizens can intervene into the development and implementation of scoring systems and other forms of data analytics, and how they can advance civic participation in an increasingly datafied society.

It will present findings from the research project 'Data Scores as Governance' (2017-18) which provided a comprehensive analysis of data-driven citizen scoring in the public sector in the UK, and the ongoing project 'Towards Democratic Auditing' (2018-20) which investigates the practices, structures and constraints of citizen engagement with datafied governance. In particular, it will discuss preliminary results of desk research, workshops and interviews with diverse stakeholders regarding citizen interventions in data-based governance and organizational responses.

In conversation with current research on auditing algorithms and data systems, and based on an academic and normative approach of data justice, the paper will argue for a holistic perspective on auditing that allows for wider citizen intervention and involves institutional reform to incorporate citizen voices in the very fabric of data analytics. It will discuss practices of citizen audits, civil society agendas, and institutional obstacles.

Data activism, citizen engagement, indigenous data sovereignty and open data

Data practices in contemporary Russia: political and epistemological promises of data activism

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Content

Data activism is a complex interaction between different social imaginaries that concerns data infrastructures and competing understandings of civic engagement (Milan, 2017; Kennedy, 2018; Gutierrez, 2018). It is rapidly expanding in different countries and context (van Dijk, 2014) being interconnected with local cultures and inscribed in social conditions.
Our research aims to articulate how data activism is possible not only from a Western perspective but also in places somewhat different from it. The question here is how to comprehend emerging data relations that expand from a global to national levels and establish what is sometimes called "data colonialism" (Couldry and Mejias, 2018).
By turning to the concept of sociotechnical imaginaries (Jasanoff, 2015) and a series of interviews with data activists in Russia we aim to understand how do they see (open) data in regards of its capacity to make social change. Here we aim to situate practices of data activism in Russian political context with its own unique roles of the state and NGOs. We suppose that post-Soviet context of institutions and visions of individual persons may be significant explanatory factors in understanding how data as a form of social

power is enacted (Beer, 2016).

We strive to set the agenda for the further research and complement understanding of what does it mean to build an "alternative digital future" (Mager, 2017) in a non-Western country and understand how local activists create and articulate "new forms of reflexive agency in increasingly datafied societies" (Baack, 2015).

Data activism, citizen engagement, indigenous data sovereignty and open data

Rethinking the politics of silencing in the age of increased prominence of globalised data access: A Case of the Zimbabwe January 2019 Internet shutdown vis a vis national networks and alternative networks.

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University of the Free state (PhD student), English, Bloemfontein, South Africa

Content
Governments today have to adjust to the realities of evolving data access and increasingly unstable social and political environments. In recent times, Zimbabwe has witnessed a turbulent period of political, economic and social interactions. This has elicited political unrest such as the mass stay away and protests from the 14th to the 18th of January 2019. During the widely publicised disturbances, the use of easily accessible media technologies and social networking sites such as whatsapp, facebook and twitter empowered citizens to produce and share media content which apparently subverted the hegemonic views and challenged the status quo. In a bid to curtail the flow of information, the government ordered a countrywide internet shutdown from the 15th to the 18th of January 2019 in a clear show of government insecurities with regards to data processes. It is vital to note that two days into the shutdown, the citizens resorted to the use of Virtual Private Networks (VPN) to continue communicating. This paper provides comprehensive insights into the political consequences of the digitalisation of the public sphere. Whereby, in the Zimbabwean case, the public were able to use social networking sites to participate in public discussions regarding political, economic and social issues. The paper also aims to show how different communication patterns and habits emerge from processes of global integration, technological standardisation and digital innovation (such as the VPN that the shut-out Zimbabwean resorted to). I also try to answer the question of whether increased globalised data and digital structures compromise or support existing government control or fuel struggles for justice.

Data activism, citizen engagement, indigenous data sovereignty and open data

Indigenous responses to datafication and data colonialism: Indigenous Data Sovereignty movements in Aotearoa New Zealand, Australia and the United States

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Content
Indigenous peoples have long and troubled histories of Indigenous statistics produced as part of the colonial project of nation-building. In recent decades governments in the settler states of New Zealand, Australia and North America have gathered large amounts of data on Indigenous populations, and are increasingly linking data from previously discrete sources to create massive integrated data sets. While there may be new technologies at play, the power to decide whether and how Indigenous peoples are counted, classified, analysed and acted upon continues to lie with governments rather than Indigenous peoples themselves. Transforming the locus of power over Indigenous data from the nation state back to Indigenous peoples lies at the heart of Indigenous Data Sovereignty (IDSov) movements.

This paper traces recent developments in IDSov, focusing on Aotearoa New Zealand, Australia and the United States. IDSov is fundamentally concerned with the rights of indigenous peoples and nations to control the collection, ownership, and application of data about their people, territories, lifeways and natural resources. IDSov is grounded in local understandings of sovereignty which challenges conventional 'data sovereignty' discourse, and is supported by global human rights instruments such as the United Nations Declaration on the Rights of Indigenous Peoples. We discuss some of the risks of digitalisation and consider how IDSov, as an emerging site of science and activism, can mediate the very real potential for individual and collective harm to Indigenous peoples, while providing pathways to benefit.

Oral presentation

13:30 - 15:00   SFG 1030

Big data and humanitarianism vs. corruption and public debt

Big data and humanitarianism vs. corruption and public debt

Studying the fringe of the platorm society - Gab.ai

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Content

Since 2016, the growing administrative and public incentive for more moderation, led several of the major social media platforms to take measures against hate speech. Where some viewed this as governmental – and therefore civil - pushback on the Silicon Valley tech giants' colonisation of the public sphere, other online communities perceived this as censorship imposed by the social media platforms, which were assumed to be a neutral and open forum (Robertson, 2018). Predominantly focussing on the alt-right, several alternative platforms, that allow for the speech that was banned on their mainstream equivalent, have manifested (Zannettou, 2018). However toxic these services might be, their attempt to erode the hegemony of Facebook, Twitter, YouTube, but also Patreon, provides a fascinating case of bottom-up resistance to the privatization of public space and public values that platformization brings about.

This research investigates the alternative social media platforms, hereby called 'fringe platforms', where alt-right content and celebrities roam under the banner of free speech, and where mainstream platforms are challenged on their management of the 'networked public sphere'. Through the example of the Twitter-surrogate Gab.ai, a fringe platform that since the deadly shooting in the Tree of Life synagogue has gained great notoriety, we aim to uncover the role of a contesting periphery in the online communication and information ecology of our contemporary platform society (Dijck, 2016)? How do fringe platforms shape networked publics (Boyd, 2010), what are their technical and financial infrastructures, how do they govern and how are they governed?

Big data and humanitarianism vs. corruption and public debt

Beyond Optimism: The Cruel 'Iron Cage' of Data Science in Education

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Content

'Data Science' is emerging as a methodological tool in educational settings with the promise of transforming the future of education. In spite of the ostensive commitment to increasing the equity, efficiency, and productivity in American school systems, such goals, in fact, are merely an old positivistic view of progress hidden in the veneer of a new optimism. The introduction of data science into education reinforces current trends in educational managerialism, corporatism, and "outcome-based" or "evidence-based" education. This talk will argue that the prospect of data science in education is not merely a case of techno-optimism, but

can be better understood within the theoretical framework of what Lauren Berlant has termed 'cruel optimism.' Data Science in education extends, and even exaggerates, the production of subjects both as data produces, objects of data, and producers of systems of understanding subjectivity through data. In other words, the victims of positivistic subjectivity construction desire, perpetuate, and innovate new systems of positivistic subjectivity construction. Drawing from ethnographic data from educational practitioners, researchers, and activists, this study will bring critical perspectives on the possible impacts of modeling education through reductionist logics of metrication. This paper will argue that the application of Data Science in Education has two effects: 1) the exacerbation of latent tensions between the goals of Education Policymakers and the tools chosen to achieve them, and 2) that that Data Science reinforces the construction of a positivistic subject amenable to the tools and analysis of Data Science.

Big data and humanitarianism vs. corruption and public debt

The data annotators: how to improve labour conditions for AI's crowdworkers?

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Content

Crowdwork platforms such as Amazon Mechanical Turk are a crucial component of the data assemblage. Low paid crowdworkers perform the vital labour of manually labelling large scale and complex datasets; labels that are needed to train machine learning and AI models. For example, Fang (2019) recently reported that crowdworkers had unknowingly contributed to a data labelling task to develop an AI that helped the US military sift through hours of drone footage to select targets. While crowdwork is often imagined as a solitary and isolating experience, Gray et al (2016) identify that crowdworkers often collaborate to meet their technical and social needs. Examples include engaging in online forums and the use of plugins such as Turkopticon. Yet, Salehi et al (2015) observe that despite such activity significant barriers stand in the way of crowdworkers' efforts to collectively improve their labour conditions.

In this paper, we discuss the findings of an interdisciplinary project that has involved (1) experimental work to 'hack' the crowdwork infrastructure and develop a plug-in that informs workers about the existence of quality control checks in their workflow allowing them to circumvent quality control systems and potentially use the tool in a form of digital strike, and (2) a qualitative study involving interviews (n=20) with crowdworkers about their experiences, reflections on our plug-in, and thoughts on opportunities for collective means of improving worker conditions. We conclude by presenting early work on a model for a crowdworker co-operative.

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Big data and humanitarianism vs. corruption and public debt

Tracing the mundane in/securities of the datafied school

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Content
Adding to recent attempts to make sense of data power in relatively mundane contexts, this paper explores how digital data intensifies and extends inequalities and in/securities within secondary school settings.

The paper is one of the first outputs from a new three-year study of the datafication of Australian schools. Here we draw on the tradition of 'trace ethnography' to construct two case studies of the data narratives resulting from seemingly mundane events during a school day (a student arriving late for school; a teacher deliberating over awarding a test score).

In each instance, we follow the pathways of the individual data packets that result from these actions – first through the school's local data infrastructure, and then quickly into global networks of the data economy.

Based on interviews, infrastructural-mapping, and data-log analyses, each of these 'data narratives' provides an evocative, thick and appropriately complex account of how data is being 'done to' individuals.

In particular, these accounts are used to map out the socio-technical assemblage of actors, technologies, standards and infrastructures that are implicit in the generation, maintenance and (re)circulation of school data.

In so doing, the paper unpacks emergent patterns of power, politics and agency associated with the datafication of everyday school practices. We conclude by considering what would be required for these forces to be challenged (and even subverted) by those currently subject to the datafication of their in-school actions and behaviours.

Emerging in/securities through algorithms and automated decision-making

Emerging in/securities through algorithms and automated decision-making

What to Account for in Algorithmic Accountability: A Systematic Literature Review

M. Wieringa

Utrecht University, Datafied Society, Utrecht, Netherlands

Content

As research on algorithms and their impact proliferates, so do calls for scrutiny/accountability of algorithms. As of yet, a systematic review of the work that has been done in the field of 'algorithmic accountability' is lacking. This contribution puts forth such a systematic review, following the PRISMA statement. 242 English articles from the period 2008 up to and including 2018 were collected and extracted from Web of Science and SCOPUS, using a recursive query design coupled with computational methods. This recursive search strategy made it possible to look beyond the term 'algorithmic accountability'. That is, the query also included terms closely connected to the theme (e.g. ethics and AI). This approach, allows for a perspective not just from critical data studies, but an interdisciplinary overview drawing on material from data studies to law, and from computer science to governance studies.

In order the structure the material, Bovens' widely accepted definition of accountability as a relation between actor and forum is used as a focal point. The material is analyzed on five points: (1) for its arguments on the actor, (2) the forum, (3) the content and (4) the criteria of the account, and finally (5) the consequences which may result from the account. By mapping what one needs to account for in algorithmic accountability lacunas, tensions, and agreements are identified. This results in the formulation of a common definition of algorithmic accountability, and the identification of potential new lines of inquiry of algorithmic systems, data-driven governance, and 'good' algorithmic practice.

Emerging in/securities through algorithms and automated decision-making

In the Wake of Ad-pocalypse: YouTube and Securitization

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Content

My paper examines the algorithmic practices of YouTube after 'Ad-pocalypse' through a Data Justice lens, evaluating the potential threats to social justice underlying the reactive changes made to Google's data management.

'Ad-pocalypse' refers to the 2017 media scandal where YouTube advertisements were reportedly generating income for various extremist groups and, once alerted to this, approximately 250 brands pulled their advertisements from YouTube. In response, Google's CBO listed three methods by which Google/YouTube would address the misalignment of advertisements: their ad policies, their enforcement of these policies, and

through introducing new controls for advertisers. However, these changes were also accompanied by 'four new measures to fight terrorism online', demonstrative of YouTube's ability to invisibly disseminate a cultural foreign policy that does not challenge the economic conditions that drive YouTube's own growth.

Overall, this research examines two issues: firstly, how the withdrawal of advertisers in 2017 impacted on YouTube's distribution of information and capital by significantly strengthening mechanisms of control for both advertisers and YouTube's artificial intelligence content identifiers (Google Brain); and, secondly, how YouTube's response to 'Ad-pocalypse' by fighting terrorism highlights the platform's global forms of premediative securitization in its regulation of a biopolitical body that ensures a consistent flow of revenue. The continual examination of Google is increasingly important; its crucial role in people's access to information means that its algorithm-driven decisions have already become a naturalized form of organizing and displaying information. Intervening in this naturalization is critical, as Google's datafication of users directly impacts on people's ability to participate in society; some more than others. Moreover, as Google is progressively working more with government (i.e. counter-terrorist Redirect Method in 2017) and military groups (AI tech for drones, Project Maven, 2018), understanding how their technologies perceive and sort particular users is vital for challenging algorithmic bias that promotes inequality and intensifies surveillance among specific demographics.

Emerging in/securities through algorithms and automated decision-making

Investigating school teacher's (in)securities about educational software

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Content
With the growth of educational software market and its integration into classroom teaching and learning processes, subject teachers are facing new challenges. They require additional training to engage critically with otherwise black-boxed algorithms behind commercial e-learning applications, requirements on data protection, media and computer skills. However, such kind of training is voluntary and not yet widespread among all German schools. In addition, there is an ongoing trade-off between classroom transparency and surveillance and the role of software design in providing either of it. Thus, teachers are acting in insecure conditions, where e-learning software configures processes of teaching and learning. In this context, we aim to understand which ethical and legal (in)securities teachers experience when using educational software in their classrooms. The guiding question of our study is, which ethical challenges for teachers relate to educational software classroom adoption? To answer it, we conducted seven interviews with mathematics teachers about their teaching with e-learning software. Based on those interviews, we developed a use case of classroom teaching with software for learning and evaluated it with experts in the domains of data protection and education. The core findings contribute to the understanding of teachers' insecurities about their (lack of) control over their own and students' activities within a piece of educational software and their data. As teachers often lack knowledge on current legislation and their own rights, there is a struggle of getting back in control, especially in the context of growing markets for commercial educational applications.

Emerging in/securities through algorithms and automated decision-making

Insecurities in intimate data practices – the case of menstrual cycle apps

K. Amelang

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Content

Application software for mobile computing devices forms part of the numerous digital technologies that pervade, mediate and constitute our daily life. Developed for commercial use, app-related practices of data collection and analytics have become the subject of societal debates on privacy issues and questions concerning what data we do reveal to whom or who is collecting and using data for what purpose. This is especially true for apps that process body data and are part of self-tracking practices. Besides criticism and ambivalences towards "intimate surveillance (Levy 2015), insecurities emerge also with respect to the promises and failures of 'taming' the uncertainties of bodies and life via datafication, quantification and algorithms (Lupton 2015). The paper will outline these two areas of data in/securities by drawing on ongoing ethnographic research about the usage, development and societal discussion of menstrual cycle apps. Allowing to document, monitor and predict monthly flows, menstrual cycle apps represent not only the digitized version of the well-known menstruation calendar but allow tracking and visualizing all kinds of body data, habits and intimate relationships. They provide self-knowledge and often promise an algorithm that learns in the process of its usage, from the data entered. Individual and social negotiations of the predictive power of algorithms and the effects of relying upon them tie in with long-established debates of the incalculability of 'female nature', categories of 'safe' or 'natural' methods of contraception and the politics of fertility and human reproduction. The paper provides an example for how software/technology is as sociocultural product enmeshed in societal politics and power relations and contribute to the conference's question of how people engage with in/securities of and through data.

Oral presentation

13:30 - 15:00   SFG 2030

Data-driven governance and open data

Data-driven governance and open data

Copyright and the Algorithmic Assemblage

D. Burk

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Content
Automated decision-making, coupled with data profiling, is increasingly being deployed to mediate or to assist in legal determinations across a range of domains including corporate law, criminal law, contract, and tort. In the area of copyright, "Big Data" profiling proposals include the personalized modulation of infringement liability based on consumer market profiles. This work postulates matching a consumer's willingness to pay for copyright protected content to liability for violation of exclusive rights in the content – in essence, waiving exclusivity based on market profiling. If the content were available only at a price higher than the consumer's algorithmically determined willingness to pay, no liability would accrue for copying the work. Conversely, if the protected work were available at or below the consumer's expected willingness to pay, liability would attach.

However, an increasingly robust sociological literature on human interaction with algorithms demonstrates that such approaches will likely distort the markets in which they are applied. Consequently, in this paper, I begin to map out the intersection between the social construction of markets and the social construction of data profiles in the context of intellectual property law.
I begin by examining the problematic assumptions that economic consumer metrics bring to copyright. I then turn to consider the use of algorithmic data processing in determining such metrics, outlining first the decontextualized nature of algorithmic data ingestion, and then the strong social reflexivity effects associated with algorithmic scoring.

When applied to copyright liability, these effects can be expected to categorically re-structure both markets and market actors associated with copyright. I further suggest that when taken as a metric for judicial determinations of liability, the social effects of algorithmic categorization can be expected to generate unexpected and perverse outcomes. Thus, reliance upon algorithmic consumer scoring is not merely problematic for copyright policy, and has implications not only for algorithmically determined copyright liability, but for the use of algorithmic metrics in other areas of law as well.

Data-driven governance and open data

Access to personal data protected as trade secrets

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Content

Introduction
With markets being highly competitive and vulnerable to disruptive innovations as well as the risks for privacy and vehicle security it is not surprising that multiple stakeholders seek ways to gain access to the vehicle to be able to communicate with the driver and to obtain, monetize and/or take control over vehicle data.

Using trade secret protection, vehicle manufacturers can benefit from protecting valuable business information becoming available to their competitors without their permission. To what extend vehicle data can be protected as a trade secret however is complicated by the fact that most vehicle data constitutes personal data and processing must comply with the GDPR.One such requirement is to grant the driver as the data subject access to personal vehicle data and the right to data portability to another controller of a subset of the data.

The aim of this paper is to contribute to the discussion on regulating vehicle access by addressing the questions whether vehicle manufacturers can rely on trade secrets protection to control access and use of vehicle data.

The paper is organized as follows: Based on the assumption that the data can be processed lawfully either based on the driver´s consent or contract, it briefly discusses the classification of vehicle data as personal data before going into the requirements with regard to rights for the driver to obtain access and the right to data portability as these may impact to what extent trade secret protection is possible for vehicle data. Providing a critical analysis of the EU Trade secrets directive, looking at the main conditions for trade secret protection and its scope in relation to the right for drivers when vehicle data includes personal data and conclusion that trade secret protection can play a role allowing vehicle manufacturers to control who can have access to vehicle data and conditions.

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Data-driven governance and open data

Interfaces of open data in a smart city: access and obfuscation in London Datastore and MyLondon app

G. Tavmen

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Content
As data practices become ever increasingly prevalent in the governance of our political and social life, how these data are being conveyed to non-expert publics has become a critical question. Moreover, in the case of open data, the ways in which data are mediated to citizens need particular attention since open data is often coupled with empowering and democratising promises. Accordingly, this paper discusses the interfaces of open data in the context of London's smart city strategy. To do so, I study Greater London Authority's London Datastore, and MyLondon app within, and inquire into what type of knowledge they prioritise and use as a normative force by rendering select datasets into an interface (Marres & Gerlitz, 2015). A recipient of Open Data Institute's 'Open Data Publisher Award' in 2015, London Datastore is often presented as a success story coming out of open data-driven smart London. The lesser-known MyLondon app, which is built on open data, provides information per housing block in any given neighbourhood, for those who want to make an informed choice while relocating. Here, I argue that, to the contrary of city

dashboards that display real time data to provide an outlook of cities' performance, London Datastore does not reduce the city to performative data feeds; however, it also fails in providing actionable knowledge to individuals due to the ways datasets are made available. By looking at what MyLondon reveals and conceals on the other hand, I show that the epistemological output of this app is far from being experiential or situated. Therefore, through simplification of everyday life, it contributes to naturalising and obscuring power relations inherent to urban spaces. On that note, the paper intends to raise questions regarding the 'appification' of public life instead of taking open data initiatives and applications as inherently positive.

Data-driven governance and open data

Understanding Power Positions in a New Digital Landscape: Perceptions of Syrian Refugees and Border Experts on Relocation Algorithm

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Content
In a new digital landscape, algorithmic decisions result in important outcomes for everyday life. This widens the hierarchy between decision makers and subjects of algorithms. Previous studies focused on governance of mobilities through algorithmic selection (Just & Latzer, 2017; Schäfer & Van Es, 2017), social inequalities and discrimination as a result of algorithms (Leurs & Shepherd, 2017). However there is gap in the literature for empirical studies that inquire how people with different power positions perceive potential outcomes of algorithmic governance. Our study explores the differences and similarities between the perceptions of data experts and refugees as data subjects regarding algorithmic methods used for mobility control. The positions regarding data-driven algorithm assigning refugees across resettlement locations (Bansak et al., 2018) is under consideration. The interviews conducted with data experts (n=24) and Syrian refugees (n=19) in Estonia and Turkey combined open-ended questions with projective techniques and covered topics like the use of algorithmic methods for governance of mobile groups. Results indicate that the understandings about algorithmic governance differ substantially between refugees and experts – whereas experts tend to express faith to the algorithmic mobility control methods, that are seen as a progressive innovation, the refugees are concerned since their subjective positions in the process of governance through data are not taken into account. This study demonstrates that power positions affect people's perceptions about algorithms. Moreover, the decisions that prioritize efficiency over priorities of refugees reproduce the existing technological hierarchy and social inequalities.

Critical, theoretical and feminist approaches to data in/securities

Critical, theoretical and feminist approaches to data in/securities

The Democratisation of Machine Learning and its Harmful Secondary Effects

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University of Bremen, Institute for Information Management, Bremen, Germany

Content
Companies are increasingly interested in utilizing machine learning (ML) algorithms to (semi-)automate important business decisions. For example, Amazon trained a system on hiring decisions of the past to help their future recruitment. However, the system learned to identify masculine language rather than tech talent. Trained on data about an industry that is predominantly male, the recruiting tool (re)produced a bias against women. While Amazon never used the tool in practice and discontinued their AI recruiting activities, their efforts offer a high-profile example for the challenges posed by machine learning with respect to fairness, accountability, and transparency. We show how the democratization of ML can act as a catalyst for such challenges. Open source programming libraries and cloud providers enable more and more people to apply machine learning without programming skills or a statistics background, which can lead to harmful misapplications of such technologies. While the training of ML systems is becoming increasingly easy, the rigorous evaluation of such machine learning systems remains challenging. The easier these tools can be used, the more accessible such systems become to people who do not possess even basic statistical knowledge. We argue that the democratization of machine learning leads to a redistribution of agency in socio-technical ML systems which reinforces biased decision-making or introduces new biases. Building on the notion of translation (Callon 1984, Latour 2007) and that any translation always also entails betrayal (Law 1999), we argue that those who train a ML hiring system blindly assume trust in the system to make (informed) recommendations based on a translation process of individual decisions of the past into a statistical model of (apparent) objectivity.

Critical, theoretical and feminist approaches to data in/securities

Machine Stories: Machine Learning as Computerized Narrative Design

S. Paff

University of Memphis, Anthropology Department, Memphis, United States

Content
Narratives have been one, if not the, major means humans have processed information and determined responses. Machine learning algorithms, using inductive data analysis, have become increasingly used to produce their own computerized narratives and to broker what narratives humans consume amidst a high magnitude of potential information. Using an ethnographic project I conducted with Indicia Consulting and University of Memphis which integrated ethnographic and machine learning techniques as a case study, I will analyze the anthropology of machine learning, considering the sociocultural agency of machine learning algorithms. This paper will discuss the transformation in narrative forms between humans and computers

involved in creating and utilizing machine learning algorithms. Further, I will connect interdisciplinary perspectives to explore the new moral narratives arising from the development of computerized knowledge production.

Critical, theoretical and feminist approaches to data in/securities

Framing Algorithmic Accountability through the Epistemontology of Data Practices: A Critical Approach to Mapping and Resisting Data Power in the Legal Context

S. Lulz

Humboldt University, Faculty of Law, Berlin, Germany

Content
Algorithmic accountability has become the buzzword of critical technology, law, and society academic and policy circles. But is its framing adequate for a materially effective critical position? This paper argues not. Through a problematisation of the term by illustrating the gaps in the theory and practice surrounding data, particularly those in cases of pre-emptive machine learning algorithms, it is argued that the modes of knowledge production in critical academia around algorithmic accountability are divorced from grassroots experiences of algorithmic unaccountability. In doing this, the paper critically maps the examples of Uber drivers strikes and protests against Airbnb in Berlin/Dutch protests against use of algorithmic decision-making in social security decisions (TBD) as resistances to pre-emptive machine learning, and illustrates how the dominant current discourse excludes these lived experiences from its consideration of algorithmic accountability and urges more critical orientations to mapping resistances like these within the algorithmic accountability discussions.

Such critical mapping allows for the evolution of a constructive project in the second part of the paper, founded on the question: If algorithmic accountability as conceptualised in the dominant discourse is ineffective, how can we go about developing an effectively critical account for accountability, especially in legal-policy actions? To address this, I draw on the work of Michel Foucault and Karen Barad to contextualise the critical mapping of the first part of the paper as relevant to resist the techniques of power prevalent in data and algorithmic practices. Drawing upon such work, the paper ultimately advocates for a sideways movement in the tech law and policy discourse, viz. from the analysis of algorithmic accountability through the ontology of the 'data subject' to an 'epistemontology' of specific data and algorithmic practices. The critical algorithmic accountability question which thus emerges is a matter of how to responsibly draw boundaries.

Audience that the paper wants to address: critical law, tech, society academics and activists

Critical, theoretical and feminist approaches to data in/securities

Data are dead (again). Long life to data!

G. González Fuster[1], R. Bellanova[2]

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[2]Universiteit van Amsterdam, AISSR, Amsterdam, Netherlands

Content
Data are collected, processed, transferred, further processed, accessed, pseudonymized, de-(re)identified, frozen, mined. Data live many lives – but also many deaths. These deaths are the condition of their lives, and the basis of their power. Since 2017, millions of passenger data (PNR) collected by United States (US) authorities have been moved to a 'dormant' database. PNR, generated out of commercial transactions, are pushed into an advanced processing system, anonymized, and eventually put to sleep. While in their native

setting they are used to maximise air-travel industry's benefits, PNR live a second life when further processed for security purposes.

The implicit assumption of many social sciences works concerned with data-power is that the lifecycle of data is rather straightforward. The world is datafied (through generation or capture), and data are turned into actionable information. From this perspective, their birth is the moment characterizing data as tools for governing societies. Yet, the reality of contemporary data practices shows that data are continuously disciplined, and sometimes deeply modified through their lifecycle – for instance by the inclusion and exclusion of the 'personal' category. As critical literature in media and science-and-technology studies highlights, data are (re)structured, integrated and (re)formatted when they move to new databases or feed new algorithms.

This contribution takes a critical look at datafication by advancing a thinking of data as 'event'. Data are the paradigmatic object and subject of decay and (re)generation. Focusing on the US PNR system, we explore data's lifecycle through the notion of 'composting' (which we draw from Donna Haraway's work). This permits us to better understand how power operates inside data, and the connections between these multiple events of data and the power of data practices.

Oral presentation

15:30 - 17:00 SFG 1010

'Good' data, data justice and well-being

'Good' data, data justice and well-being

Deep mediatization, datafication and good life

A. Hepp

University of Bremen, Bremen, Germany

Content

Today's society and the underlying social world are deeply shaped by datafication: the representation of social life in form of computerized data. The discussion about 'data colonialism' (Couldry / Mejias 2018) shows that the inequalities run both between the global North and the global South as well as across this difference. This questions existing approaches to datafication in a fundamental way: we need a fully materialist phenomenology which takes the construction of meaning and technical infrastructures into account and focuses much more on the related inequalities than it is done up to now. The aim of my presentation is to discuss how far deep mediatization is related to datafication and outline an approach how we can grasp the related inequalities across the global North and the global South. I, firstly, will explore the concept of deep mediatization that it involves a fundamental transformation in how the social world is constructed, and so can be described. Offering such an account I, secondly, will explain more in detail the need to understand data and datafication in a proper way to describe related inequalities. Thirdly, this brings me to the question: What would a *Gestaltung* of deep mediatization look like if it was to be productive towards the notion of a 'good life' (Wang 2015) for as many people as possible – and operating across the global North and the global South?

References:

Couldry, N. & Hepp, A. (2017) *The mediated construction of reality*. Polity Press, Cambridge.

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'Good' data, data justice and well-being

Governance of Mobility through Data: Acculturation through Integrative Data Practices

A. Masso[1, 2], M. Männiste[2]

[1]*Tallinn University of Technology, Tallinn, Estonia,* [2]*University of Tartu, Institute of Social Studies, Tartu, Estonia*

Content

The starting point of this study is formed by theoretical discussions of the governance of spatial mobilities through algorithms (Just & Latzer, 2017), and the inequalities and discrimination such sorting may lead to (Eubanks, 2018). Universal social justice principles are suggested as a solution to data discrimination (Dencik et al, 2016; Taylor, 2017), however its implementation assumes fundamental shift in data relations, where the local data practices have to be appropriated with the emerging geopolitical hegemonies of data (Couldry & Meijas, 2018).

We study understandings of new emerging data hegemonies and construction of social relations in the context of datafied control of mobilities. We conducted a Q-methodological study among experts responsible for the analysis and management of data related to mobile groups (n=24). Quantitative discourse analysis with a centroid extraction method in software KenQ is combined with qualitative analysis of open-ended questions with Maxqda software.

We found four types of governance of mobilities through algorithms: (1) data-based liberal internationalism and orientation to human rights, (2) integrative data activism through cooperation and disciplinary continuity, (3) (big) data critical and organisational data culture orientation, and (4) discrimination aware data governance and privacy protection orientation. Based on empirical analysis, we contribute to the conceptualisations of algorithmic governance, proposing a conceptual framework for 'data acculturation' – social cohesion through integrative data practices. We explain the mechanisms necessary for appropriation of data relations in the ways, that the integration of disadvantaged mobile groups through data is assured.

'Good' data, data justice and well-being

Datafication of Mobile Lives: Discrimination through Algorithmic Selection

M. Männiste[1], A. Masso[2]

[1]University of Tartu, Institute of Social Studies, Tartu, Estonia, [2]Tallinn University of Technology, Ragnar Nurkse Department of Innovation and Governance, Tallinn, Estonia

Content

Recent discussions have highlighted the concerns related to algorithmic selection used by either private or governmental institutions. Discrimination which may follow is claimed to impact already marginalized subjects (Leurs & Sheperd, 2017) and led to a need to govern and regulate algorithms (Kitchin, 2014). Although there has been many theoretical discussions on the topic, there is still a lack of empirical studies on the issue.

We rely on in-depth qualitative interviews with Estonian data experts (N=24) responsible for the analysis and management of data flows related to mobile groups in Estonia, understandings of social datafication, algorithmic selection, as well as their attitudes and experiences with data related to mobile groups. The following research questions were posed: (1) How do data experts position themselves in the context of public discussions related to the datafication of mobile groups? (2) Which discriminatory data practices are expressed by data experts governing mobile groups? and (3) How is integration through data understood and practiced by experts dealing with mobile groups?

Our analysis revealed discriminatory data practices and a need for greater transparency and control over automatized decision-making, as currently economic efficiency is exclusively prioritaized. We argue that transparency of algorithmic decision-making, where the unique needs of both advantaged and marginalised data subjects has been taken into account, has become central for assuring social intergration through data.

References:

Leurs, K., & Shepherd, T. (2017). Datafication and discrimination. In The datafied society: studying culture through data, Mirko Schäfer, Karin van Es(Eds) (pp. 211–233). Amsterdam: Amsterdam University Press.
Kitchin, R. (2014). Thinking critically about and researching algorithms. The Programmable City Working Paper 5. Retrieved from http://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2515786

'Good' data, data justice and well-being

The battle for good data regulation in Indonesia: Is it for a good cause, or what?

Y. Setianto

Sultan Ageng Tirtayasa University, Communication Studies, Serang, Indonesia

Content
This study explores the current efforts of the Indonesian government in regulating big data in Indonesian digital sphere.In recent years, many
digital activists argue that Indonesia urgently needs more strict regulation on big data, mainly due to the increasing personal digital data breaches. Furthermore, following the Cambridge Analytica scandal—where Indonesia is the third most affected country by the data breach case—the Indonesian
government is currently considering blocking Facebook in Indonesia. This was in line with the government threat to Telegram for allowing terrorist groups to circulate content on how to make a bomb tutorial. The Ministry of Communication and Information argues that the state want to secure that the citizens are only consuming good data. Therefore, digital content related to pornography, gambling, and terrorism should be controlled by the government, or even banned. The Ministry considers not all digital data would do good for the society and might even be regarded as a threat for the state's security.
However, the proposal of personal data protection law (Undang-Undang Perlindungan Data Pribadi) has been halted for several years in the parliament due to the lack of knowledge among the house members on how the state should regulate big data. Also, there is only little pressure from the public since not many of Indonesians concern about both the digital data protection and the rights for good data. Socio political consequences of this practice are discussed in the paper.

'Good' data, data justice and well-being

Is Google/Alphabet a criminal organisation? (Shall we nationalise it then?)

A. Jiménez

Auckland University, Sociology, Auckland, New Zealand

Content
Since its foundation in 1998 Google (now part of Alphabet) has become a corporate juggernaut of global dimensions. A power by its own right, is present in 8 out of 10 smartphones. It controls more than the 80% of the web searches everywhere (except China and Russia). Alphabet manages at least 15 huge data centres, not to mention a nascent fibre cable infrastructure. It's also a major IA developer (especially in the fields of applied Machine Learning) as well as an active Venture Capitalist. No doubt that Alphabet is a first-class global actor, holder of a power that was uncontested until very recently. Despite of its corporate efforts trying to picture 'Google Political believes' as an example of adamant defence of democratic values, progressive causes (racism, death penalty), technological progress and free market, Alphabet has found itself fighting in numerous legal fronts, accused of violating, precisely, what they claim to defend. Alphabet has crossed the line, entering in the realms of the criminogenic behaviour, fitting into the scholarship definition of Psychopathic Corporation. Why does a corporation that has been repeatedly fined due to its permanent violations of norms and regulations at every level, still hold the respect of authorities, who often receive its executives as foreign dignitaries? Why are its criminal acts still considered as marginal deviations, instead of being considered as a fundamental part of their Business model? In this paper I will explore a number of legal, economic, social and political arguments characterizing Alphabet as a Psychopathic organisation. Under the frame of restorative justice, I also aim to propose a potential solution to the harm caused by the company: its nationalisation. I will describe some of the most important legal and political challenges (and perhaps its solutions) we may find in a hypothetical nationalisation of Alphabet.

Oral presentation

15:30 - 17:00   SFG 1020

Data activism, citizen engagement, indigenous data sovereignty and open data

Data activism, citizen engagement, indigenous data sovereignty and open data

Playing with data and its consequences

M. Gutierrez[1], S. Milan[2]

[1]University of Deusto, Communication, San Sebastian, Spain, [2]University of Amsterdam, Faculteit der Geesteswetenschappen Capaciteitsgroep Media & Cultuur, Amsterdam, Netherlands

Content
The fundamental paradigm shift brought about by datafication alters how people participate as citizens on a daily basis. "Big data" has come to constitute a new terrain of engagement, which brings organized collective action, communicative practices and data infrastructure into a fruitful dialogue. While scholarship is progressively acknowledging the emergence of bottom-up data practices, to date no research has explored the influence of these practices on the activists themselves. Leveraging the disciplines of critical data and social movement studies, this paper explores "proactive data activism", using, producing and/or appropriating data for social change, and examines its biographical, political, tactical and epistemological consequences. Approaching engagement with data as practice, this study focuses on the social contexts in which data are produced, consumed and circulated, and analyzes how tactics, skills and emotions of individuals evolve in interplay with data. Through content and co-occurrence analysis of semi-structured practitioner interviews (N=20), the article shows how the employment of data and data infrastructure in activism fundamentally transforms the way activists go about changing the world.

Data activism, citizen engagement, indigenous data sovereignty and open data

How interactive maps mobilize people through sentiment in activism

M. Gutierrez

University of Deusto, Communication, San Sebastian, Spain

Content
Scholarship has explored both emotions in social mobilisation (della Porta and Diani 2006; Goodwin, Jasper, and Polletta 2001, 2004; Melucci 1996) and also the 'emotional turn' in critical cartography, produced by the need to integrate affects in the study of places (Griffin and Mcquoid 2012; Maddrell 2016). But thus far little has been said about how maps are employed to unleash sentiments in activism. This study looks at three cartographic expressions: a 15M map, an animation that shows a 'connected multitude' of indignad@s as they demonstrated in Spain in 2011; the 'Left-to-die boat' map, tracing the course of a ship in which 63 refugees lost their lives; and the 'Western Africa Missing Fish' map, which shows foreign fishing vessels operating irregularly in African waters. Interviews, fieldwork and participatory observation are employed here to understand how these maps were designed to activate people through emotions in data activism. Data activism is understood here as activism that is mainly enabled, and constraint, by the data infrastructure in

combination with other technologies for social change (Milan and Gutierrez 2015). This article also draws from the study of 15M maps offered by DeSoto (DeSoto 2014) and what Muehlenhaus calls 'persuasive geocommunication' (Muehlenhaus 2013) to offer a taxonomy of activist maps. The idea is to explore one aspect of how data power is enacted by civil society to occupy and decolonise data and construct a just society.

Data activism, citizen engagement, indigenous data sovereignty and open data

Cryptoparties – Acting on digital media for secure online communication

S. Kannengießer

University of Bremen, Center for Media, Communication and Information Research, Bremen, Germany

Content
Cryptoparties are events in which people meet to pass their knowledge about or learn about secure online media practices such as encrypting online communication, internet browsers, or hard disks. While some people offer help in realizing these processes others attend with their laptops, tablets and smartphones to learn how to encrypt. Cryptoparties are organised by different people in different locations; they are a global phenomenon.
In an empirical study, the events of cryptoparties and the media practices taken place during these events were analysed. What does a cryptoparty look like? Who are the people coming to these events? What do people do at cryptoparties? Why are the participants aiming at encrypting their media practices respectively passing on their knowledge about encryption? These questions where followed using a qualitative approach. As case studies, two cryptoparties in Germany have been analysed which differ in the background of the organizers and the locations. In these events, observations have been conducted as well as interviews with organizers, people offering help, and people seeking help.
Presenting the results of this study, cryptoparties are discussed as examples of critical media practices with which people reflect on and shape the meta-process of datafication. With the term datafication, processes can be grasped with which "big data" is generated by rendering "into data many aspects of the world that have never been quantified before" (Curkier/Mayer-Schoenberger 2013, 29). In cryptoparties, people disobey the logic of data-fication and try to resist these data generating processes by encrypting their digital communica-tion processes. People in these events "act on media" (Kannengießer/ Kubitschko 2017) as they put media themselves into the focus of their action, critically engage with media technologies and software and by that try to transform the social process of datafication. Therefore, cryp-toparties are discussed as an example for „data activism" (Milan 2017).
Discussing the empirical results, a critical perspective is applied, also acknowledging the constraints of the critical media practices appropriated in these events and the cryptoparties themselves as well as ambivalences which can be found in the practices.

Data activism, citizen engagement, indigenous data sovereignty and open data

Infrastructures of Anticipation: exploring emergent civil society strategies (of resistance) to pervasive surveillance and data exploitation

b. kazansky

university of amsterdam, media studies & political science, amsterdam, Netherlands

Content
As the ubiquity of surveillance and data exploitation have increasingly impacted the work of civil society actors, there has been a turn to specific practices to help anticipate surveillance and data related problems. These practices, which I term 'anticipatory data practices', help cut through the uncertainties that surround how surveillance is conducted and data is exploited. My paper offers a case study exploring these emergent

practices, as part of the larger DATACTIVE project looking into the 'politics of big data according to civil society'. I draw on ethnographic data from 50 interviews with civil society actors across transnational networks of coordination, along with extensive participant observation and the analysis of secondary data from a corpus of technical materials. I will show in particular at how 'anticipatory data practices' give rise to new forms of infrastructures which bring civil society actors together across diffuse configurations to collect, analyse, and track data in order to anticipate and prevent future surveillance-related events. These infrastructures respond to a desire for better structured and more collective practices, opening up new ways for civil society actors to work with each other, with data, and with possible futures. However, while offering up exciting new possibilities, these emergent practices also raise a number of critical questions. Here I highlight two: first, there is a worry that engaging in an anticipatory dynamic can lead to an escalation in the surveillance-resistance dynamics at play. Second, there is a concern over what is seen as an adoption of data-driven logics and techniques from other sectors. What might be lost from civil society work with the increased emphasis on data? I will explore these questions in my presentation.

Data activism, citizen engagement, indigenous data sovereignty and open data

Agonism, Abolition, and Community Activism

R. Crooks

University of California, Irvine, Informatics, Irvine, United States

Content
Datafication describes both the spread of data-intensive technologies and a concomitant ideological stake in a politics of knowledge. Data-intensive technologies of classification and decision-making, originally developed for scientific and commercial use, have spread relentlessly in racialized, minoritized, and precariatized communities in the United States: in provision of public services by government agencies, in bail decisions by the criminal justice system, in threat assessment by law enforcement, and in many other sites. Activists have responded to documented discriminatory harms through organizing, direct action, and, in many cases, strategic appropriation of the tools, language, and rhetoric of data-intensive technologies. Community-based researchers have connected state-of-art technologies to long histories of oppression and resistance in communities of color. Writing by activists educates community members and policymakers about the harms data can pose and, at the same time, offers more meaningful alternatives to the presumed benefits of technological access. In this respect, datafication has been theorized as domain of agonism, wherein interested actors propose competing visions (of the correct use of data in civic life, in this case) that are ultimately evaluated by the political collective.

This paper reports on the results of "Datafication and Community Activism: Redrawing the Boundaries of Research," a two-day workshop held with community organizers (including Data 4 Black Lives), scholars, and journalists at the University of California, Irvine on March 8 – 9, 2019. Specifically, this paper describes ways that researchers and academics can support the work of community activists in combatting forms of discrimination resulting from the use of automated decision-making. Implications for a broader research agenda that addresses datafication and its attendant discriminatory practices are discussed. This paper proposes abolition as an alternative to agonism, one that might make for a more robust accounting of both data-intensive technologies of decision-making and data-intensive forms of political activism.

Oral presentation

15:30 - 17:00   SFG 1030

Data, discrimination and inequality

Data, discrimination and inequality

Data Infrastructures for Valuing Lives

K. McEwen

University of Toronto, Faculty of Information, Toronto, Canada

Content
In recent years, 'personalization' has emerged as a pervasive and growing trend in the health and life insurance industry (French and Kneale 2009, McFall and Moor 2018). Insurers have developed programs based in behavioural economics that offer incentives (such as cash, gift cards, and premium reductions) to policyholders who demonstrate 'healthy lifestyles' through their self-tracking data. With the growing popularity of self-tracking technologies and practices (e.g., the use of wearable devices to track exercise), such programs have become more common, more integrated into daily life, and more often rationalized through reference to 'real,' 'verifiable,' and 'personalized' behaviour data.

Recent scholarship shows how data infrastructures classify and act on groups and individuals in ways that both implicitly and explicitly mobilize social categories like race, poverty, sexuality, and gender (e.g., Eubanks 2018, Dencik et al. 2018, Hu 2018, Noble 2018, Redden 2018). This presentation contributes to this area of scholarship by asking how opportunities for financial profit are made available to individuals whose data profiles are read as 'good investments.' More specifically, I examine the data infrastructures of personalized insurance programs that collect policyholders' self-tracking data in order to financially reward 'healthy lifestyles.'

I draw on interviews conducted with insurance professionals and individual users of self-tracking insurance programs. I explore how these emerging programs establish self-tracking data as a valuable asset both for insurers (who use it to drive population health improvements and lower insurance costs) and for individuals (who translate it into rewards, incentives, and premium reductions). I show how the data infrastructures behind these programs assign value to bodies and lives, and entrench self-tracking data as a 'fair' and 'verifiable' criterion for evaluating insurance risk and in/security. These programs, I argue, frame health and lifestyle as generators of value through self-tracking data, which not only reinforces the individualization of responsibility for health; it also wields health and lifestyle data as a way of separating bodies and lives into the value-appreciating and the value-depreciating.

Data, discrimination and inequality

Data Ableism and Disablism: Exporing forms of marginalization in automated societies

V. Charitsis, M. Ruckenstein

University of Helsinki, Centre for Consumer Society Research, Helsinki, Finland

Content

As data becomes the resource that enables people to unlock the promises of the digitised world, digitalisation can also lead to the marginalisation of individuals and segments of the populations that are unable to generate desirable data (Eubanks 2018). In that sense, we draw parallels to the way people are marginalised because of perceived bodily or cognitive disabilities and the way that data absences and inabilities hinder people from reaching their potential as data subjects. Wolbring (2008) attests that ableism can take many different forms (e.g. racism, sexism, casteism), and argues that studies should pay more attention to the way technology may engender new forms of ableism. Addressing this call, we engage with the literature on digitalisation and datafication and with studies on ableism and disablism to explore and theorise on the development of a new form of ableism that we term "data ableism". Drawing on Goodley (2014), we conceptualize data disablism as the data practices policies and politics that can deepen social inequalities and threaten to exclude and marginalize individuals who fail to fit the capitalist imperative. In order to demonstrate this, we present examples from Europe and beyond covering practices of automation that trace children in vulnerable circumstances, classify the unemployed in terms of their employability, or offer credit ratings. In the course of this, we offer a view to how forms of algorithmic decision making can deepen well-known forms of disablism, but also create new forms of disablism that discriminate in less obvious ways.

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Goodley, D., 2014. Dis/ability studies: Theorising disablism and ableism. London: Routledge.
Wolbring, G., 2008. The politics of ableism. Development, 51(2), pp.252-258.

Data, discrimination and inequality

The Power of Big Data to Reproduce Intersectional Relations of Inequality

B. Prietl

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Content
This paper proposes to tackle the question of data power by introducing digital technologies of knowledge generation and decision-making to a critique of rationality that is informed by discourse theory and intersectional perspectives on gender and gendered relations of inequality, whereas gender is to be understood as always intersecting with other categories of social inequality such as ethnicity or age. Following the assumption that digital technologies transform the way we gather information, generate knowledge and make decisions, it seems necessary and fruitful to take a closer look at the epistemological, ontological and methodological foundations of these technologies in order to understand how they are – from the outset and by design – interwoven with intersectional relations of power and inequality. Therefore, this paper focusses on the promises of Big Data as one currently prominent representation of digital technologies. While Big Data and Big Data-based results and decisions are generally believed to be objective and neutral, numeral cases of algorithmic discrimination have begged to differ. These cases of gender-, race- or age based discrimination are often interpreted as bias and, thus, as correctable or even preventable, if only all 'errors' are avoided. This paper argues, however, that algorithmic discrimination is neither random nor accidental; on the contrary, it is the result of the epistemological, ontological and methodological foundations of Big Data – namely: data fundamentalism, post-explanatory anticipation pragmatics and anti-political solutionism. Thus, Big Data as a way of generating knowledge is by design prone to reproduce gendered relations of inequality.

Data, discrimination and inequality

Digital inequality in China and Germany on a temporal level

M. Faust[1], X. Jin[2]

[1]*University of Leipzig, Institute for Communication and Media Studies, Leipzig, Germany,* [2]*Chongqing University of Posts and Telecommunications, Chongqing, China*

Content

This paper will focus on the third level of digital divide (Lei, Gibbs, Chang & Lee, 2008; Ragnedda, 2017) in China and Germany looking at temporal inequalities bringing social con-sequences of temporal change through digital media to the fore. China as a country of the Global South is contrasted to the West with Germany as the counterpart in a most-different-systems design (Anckar, 2008) enhancing the argument of digital and therefore social inequal-ities in its embedded cultural context.

The following research questions arise:

RQ 1: How does temporal change through digital media foster marginalized communities in Germany and China?

RQ 2: Along which lines can temporal social inclusion be achieved to reduce digital inequali-ties within and among the cultural contexts Germany and China?

In order to answer RQ 1, we focus on the most apparent formations of axes of power and privilege: rural – urban divide, gender divide, and work-life-balance labor divide. The following underlying theoretical framework supports this three-fold, yet intertwined logic of digitally induced temporal change (Faust, 2016). The indicative case study (Yin, 2003) takes a critical stance to underline the theoretical argu-ments. In an online survey of internet users in Germany (n>400) and China (n>400) and P&P interviews of off liners (Germany n>40, China n>40), that considers motivations, skills, habits and purpose of use, we investigate the change of temporal understanding. It is hypothesized, that digital media accelerate the pace of life, lead to a more short-term oriented time horizon and that people focus more on interacting experience similar to multi-tasking. Through quan-titative data analysis i.e. bivariate correlation and multivariate regression analysis we will generate evidence on digital inequalities among the three mentioned divisions creating mar-ginalized communities. In order to answer RQ 2, we focus on linking the results to the Sus-tainable Development Goals formulated in the UN 2030 agenda (United Nations, 2018). Whereas in the West such research is framed within the context of time policy with relations e.g. to stress, well-being and the labor market (Nowotny, 1989 ; Rinderspacher, 2011), an international perspective broadens it to sustainable living. The following key issues will be critically discussed to promote evidence-based policy change: sustainable cities, good health and well-being, gender equality, decent work (United Nations, 2018).

Oral presentation

15:30 - 17:00   SFG 2020

Data visualisation at the margins: Missing people, invisible people, imaginary people

Data visualisation: reconfiguring power relations between Big Data-driven policymaking and marginalised young people

J. Robinson

Birmingham City University, School of Media, Birmingham, United Kingdom

Content
Submission for suggested Panel topic:
Data visualisation at the margins: Missing people, invisible people, imaginary people

This paper is set against the backdrop of the continuing interest, on the one hand, of policymakers at all levels of government in the potential of Big Data to improve policymaking and, on the other, of researchers who have revealed a range of technical, administrative, ethical and political barriers to achieving effective and equitable data-driven policies. ([1]; [2]). I contend that in focusing on the processes of policymaking, researchers may have failed to address issues relating to the impact on citizens of the policies themselves.

The purpose of my paper, therefore, is to explore the power relationships between policymakers and their subjects through the lens of young people at the margins who may be ignored or misrepresented by Big data-driven policymaking or missing from it altogether. In so doing, I shall consider the potential of creative data visualisations by and for young people to 'humanise' their concerns and call policymakers' attention to what matters to marginalised young people in order to influence future decisionmaking.

I draw on ethnographic fieldwork within the framework of a reflexive, interactive research collaboration with Beatfreeks: a collective based in Birmingham, UK which uses creative practices to empower young people "to challenge themselves and the world in which they find themselves" (www.beatfreeks.com). This has enabled a close study (including observations, interviews and conversations with young people) of the ways in which young people, supported by members of Beatfreeks Collective, assemble and visualise data about their own and other young people's lived experiences of inequalities.

Initial findings indicate that the creation of alternative 'small data' and affective data visualisations to "re-story" their situation may disrupt the normative public sector representation of young people at the margins [3] . I argue, therefore, that this may lead to a reconfiguring of power relations between marginalised young people and policymakers by giving voice and visibility not only to their concerns but also to their ideas for change.

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Data visualisation at the margins: Missing people, invisible people, imaginary people

Imagining Users in Data Visualisation Design

J. Simpson

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Content
[Submission for suggested panel:
Data visualisation at the margins: Missing people, invisible people, imaginary people]

This paper explores how notions of user diversity are built into the design of data visualisations. By shifting attention towards how designers' imagine users [1], it will critically assess how ideas around diversity are constructed and enacted through the design process. It draws on analysis of data from ethnographic fieldwork and interviews conducted at a digital design agency.

How designers imagine different types of data visualisation user shapes their design decisions. Whilst conducting fieldwork at one digital design agency, I noticed that talk of grandmothers and mothers as users was typically in the context of accessibility. It appeared that, for the designers these (older) women embodied the lower limits of meaning making and understanding. Drawing on this and other examples, this paper argues that the designers' assumptions around user diversity were being personified through different imaginary figures. This raises questions around who is being imagined, who is being marginalised, and what is being enacted through these imaginary figures?

How users are imagined by the designers of technology matters as this is how notions of user diversity are scripted into their design [1]. When considering the data divide in society this has implications for the power relationship between designers and the users of data visualisations. The concept of imaginary figures might provide a means through which to unpack how user diversity is constructed and enacted in the design of data visualisations.

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Data visualisation at the margins: Missing people, invisible people, imaginary people

Data visualisation engagement: identifying the unengaged

A. Ridley

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Content
Data visualisations are becoming ever more common in the public sphere as complex, large scale data sets are illustrated for public consumption. Research has attempted to highlight and mitigate potential problems of this, such as the privileging of viewpoints or creating and perpetuating power relations [1] [2]. This paper

explores contemporary means of assessing 'effectiveness' and critically assesses how an automated tool can collect sociocultural data on engagement. It draws on analysis of data from ethnographic field work at a digital design studio as well as the data collected by an automated tool.

The automated tool captures engagement with data visualisation published online, which could be bar charts, maps or network graphs, usually found in news articles or public service communication for example. Building on research which identified the factors that impact on the engagement process [4] the tool focuses on capturing aspects of the sociocultural context of the audience to build a more nuanced understanding of the engagement process and move beyond understanding effectiveness from the position of insight towards the impact it has in daily life [3].

This research aims to explore new means and definitions of effectiveness in data visualisation, by capturing evidence of these factors impacting on engagement on a large scale. Identifying the people currently missing, and not just the already engaged, and capturing their engagement could challenge the "dominant ways of producing and communicating knowledge" [2] and lead to more effective data visualisations designed for a wider and better understood audience.

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Data visualisation at the margins: Missing people, invisible people, imaginary people

Data visualisation know-how by non-experts, for non-experts

L. Pinney

University of Sheffield, Sociological Studies, Sheffield, United Kingdom

Content
[Submission for suggested panel:
Data visualisation at the margins: Missing people, invisible people, imaginary people]

In these datafied times, some scholars argue that having the ability to work with data visualisations – charts, graphs, maps, dashboards – is a requirement for participation in a data-driven society. Kennedy and Hill [1], for example, argue that individuals and institutions may be excluded from identifying, understanding or resisting the data-related social injustices that shape their everyday lives because they do not have the ability required to engage with and comprehend the visual ways in which data are represented. Scholars researching data visualisations from a situated, sociocultural perspective, such as D'Ignazio and Klein [2], Gray et al [3] and Kennedy and Hill [4] have highlighted the need for a critical awareness of data visualisation as a practice, drawing attention to the power relations data visualisations create and reproduce. However, most claims about how to make sense of data visualisations currently derive from cognitive science or expert practice, contexts that are far removed from the everyday reality of populations marginalised in an unequal data society. There is a gap in knowledge about what the abilities required to

make sense of data visualisations look like from a marginalised, non-expert perspective.

My research seeks to identify what data visualisation know-how is and how it is acquired, from the perspective and for the benefit of those potentially marginalised in our data society. This paper will present the early findings from my participatory collaborations with community organisations which identify as data visualisation non-experts, and which seek to acquire what I describe as 'data visualisation know-how'.

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Oral presentation

15:30 - 17:00   SFG 2030

Data-driven governance and open data

Data-driven governance and open data

The discontents of data abundance – Data regimes and power in Finnish health data landscape

V. Aula

London School of Economics and Political Science, Department of Media & Communications, London, United Kingdom

Content
This paper presents the results from a case study conducted in Finland in 2018 on an ongoing big and open data inspired health data infrastructure and legislative reform. Research data consisted of interviews, and policy and legislative documents. It shows how the abundance of publicly owned health data and the prominence of government institutions in policy became a source of dispute and insecurity as the new ideas of big and open data pushed towards widening integration and dissemination, but faced an institutional backslash. The context of Nordic welfare state creates a highly state-driven one where the power dynamics between public institutions, companies, and citizens differs from the wider global discussion on datafication in private data economy. The concept of data regimes is proposed as a way of conceptualizing the dynamics of power in the analysed case. Data regimes complement the concept of infrastructures as frameworks of practical, cultural, legislative, and technical interoperability that support mutual collaboration within the regime, and act as networks of power. The analysis shows that existing data regimes have a key role in providing security and trust in public health data in Finland. However, due to their different rationalities and self-contained nature, regimes can drift to different directions and also drive changes that risk public trust. This last point underscores the importance of analysing data-related institutional questions as issues of politics rather than ethics, as the latter framework can be blinkered towards the wider dynamics of data power. Finally, it is argued that data regimes present a conceptual tool for comparative study of data power within and between national settings.

Data-driven governance and open data

Open Data in Practice: Future Challenges and Provocations.

S. Jethani[1], D. Leorke[2]

[1]University of Melbourne, Culture and Communication, Melbourne, Australia, [2]Tampere University, Finland, Faculty of Information Technology and Communication Sciences, Tampere, Finland

Content
Open data initiatives are championed for their potential to improve intra-governmental workflows, engage citizens in the design of new digital products and services, and inform the design of laws and policies. This paper draws from ethnographic research conducted by the authors that involved evaluating attitudes about the value, potential, and purpose of open data amongst various actors in the open data sector. We argue that this research – conducted in Australia and drawing on semi-structured interviews, a national online survey and observation – highlights the importance of recognising a range of subject positions on open data

among a diverse range of stakeholders involved in data sharing and release initiatives. We discuss the complexities of translating the ideological, legal, and policy mandates around open data into a sustainable program of work within the context of the 'business as usual' work of government agencies. We focus on two challenges that were raised by informants in our interviews. First, our informants demonstrated conflicting notions of openness concerning the formats that data is presented in, their potential to contribute to transparent democracies, the design of new civic technologies, and their potential to contribute to economic growth. We identify a range of affordances that constitute what 'open' is understood to mean in the context of government decision-making, resource allocation, and innovation. Second, informants described exchanging their professional and citizenry identities when discussing matters of risk, privacy, and nefarious re-use associated with the sharing and release of government data. Reflecting on these issues we offer a series of provocations that indicate the directions open data initiatives might take in the future: How might open government data practices be brought closer to participatory models of service design? How can data release support transparency around government activity, and what is an appropriate position of government data in the broader open data ecology?

Data-driven governance and open data

Data Power and Local Governance

L. Siffels[1], D. van den Berg[1], M. Schäfer[1], J. Dingelstad[2], A. Meijer[2]

[1]Utrecht University, Utrecht Data School, Utrecht, Netherlands, [2]Utrecht University, Bestuurs- en Organisatiewetenschap, Utrecht, Netherlands

Content
With the transition many government institutions are making toward data-driven government, it is necessary to rethink how public values are secured in this process. Government employees therefore need the knowledge and capacities to apply data practices in ways that do not infringe public values. Policy makers must develop perspectives affording to connect the various stakeholders of the process of datafication to public values in order to prevent third parties or undesired technological solutions to undermine the open society. Academics need to investigate how power is manifested in data practices. This paper describes an interdisciplinary research project that inquires data practices at three Dutch municipalities and one Dutch province. The aims of this project are two-fold: firstly, to develop knowledge on data practices in government institutions that will help them to make responsible and effective use of data-driven public management. Secondly, our researchers investigate data justice in these government institutions. This multidisciplinary research project maps data power, public values and legitimacy in local governments. In order to investigate data practices, we use the framework developed by Bennington and Moore (2011), which means our research is shaped by three main questions. First, we investigate the public values enacted by data practices. Secondly, we look into how these practices are justified and legitimated. Thirdly, we investigate how these research practices are formalized and which operational capacities are required for this formalization. With every government partner, we use a specific case with which we investigate these three lines of research. This paper shows the insiders perspective to data power in government institutions.

Data-driven governance and open data

Networks of power in local and global surveillance

x. minocher, C. Randall

UW-Madison, Madison, United States

Content
Whether we are discussing Weapons of Math Destruction (O'Neil, 2016), "The Dystopia We Signed Up For" (Manning, 2017), or Automating Inequality (Eubanks, 2018), it is clearly recognized that there is much work

for those interested in pursuing and creating critical perspectives of equality and resistance in today's globalized, digital political economy.

Yet, while there may be the emergence of new concentrations of data power, much of what we identify as systems of control or inequity today, are stalwarts of the past. Keeping this in mind, we explore one element of today's global in/security through a historical lens: the practices of predictive policing in the United States as an extension of the state apparatus of surveillance, which has long been used for the social control of communities of color (Browne, 2015).

Using a case study of Intelligence Fusion Centers (IFCs) located in Madison and Milwaukee, Wisconsin, we explore what factors led to the adoption of big data-facilitated and algorithmically-driven predictive policing systems, and focus on the concentrations and relationships of power that undergird the presence of these systems in Wisconsin today. IFCs are joint data-collection operations between police departments and the US department of Homeland Security, and our early analysis has revealed links to the State public university system, local police departments, "tribal" agencies, and the Department of Justice. In mapping these relations, we help outline and identify the key actors that are leading these data-driven practices of surveillance in America, modeling a perspective in which to analyze today's complex sociotechnical systems and consider the important questions of resistance and challenge.

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Oral presentation

10:30 - 12:00   SFG 0150

Critical, theoretical and feminist approaches to data in/securities

Critical, theoretical and feminist approaches to data in/securities

Data, surveillance and the citizen's body: A critical look at "Aadhar"

A. Mukhopadhyay

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Content
This paper is centered around two intersecting questions related to biometric data in the Indian context: What forms of surveillance are made possible by indexing of citizenry in India through "Aadhar" (unique identification card)? And how discourses of governmentality and neoliberal capital use the "body" as a metaphor to justify notions of "security" "development" and the ideal citizenry? Primarily using Foucault's ideas of Biopower, this paper seeks to explore the networks of relationship, between data, technology and the "body" of the citizen. To explore these relationships, I am analyzing the arguments presented by the government of India in favor of "Aadhar" card when the efficacy of "Aadhar" was legally challenged. Through a critical analysis of the power structures of the discourses around "Aadhar", I argue here that neoliberal forms of governance naturalize new regimes of differences through indexing the data about citizen's bodies, and at the same time intrude upon the natural rights of citizens through arguing that security of the state is contingent upon surveillance of bodies. Also, the "body" of the citizen formed through mechanics of data capitalism is used by the present regime of governance in India to further the project of defining and excluding the devious, dangerous and alien bodies; to construct a notion of ideal nationhood centered on the fascistic project of "Hindutva".

Critical, theoretical and feminist approaches to data in/securities

Data Bodies and the Sociotechnical Power of Ignorance

L. Lahikainen, J. Parviainen, S. Ridell

Tampere University, Tampere, Finland

Content
A significant aspect of power in our techno-human condition concerns the masses of user data that commercial and political agencies collect and use. The issue is present in scholarly discussions on "data twins" that posit a rather straightforward connection between digital replicas and physical objects. In contrast to such an approach, we adopt the term "data bodies". Our proposal is that to capture the infrastructural aspects human corporeality and algorithmic technologies, it is necessary to direct attention to the recursive cybernetic loop to which computation integrates human bodies through habit formation. Discussions on "data twins" have addressed the connection between digital replicas and physical objects referring to an up-to-date and as-if accurate copy of the physical object. In contrast, we adopt the term "data bodies" to show that collecting data is always unilateral and may result in stereotyped and twisted representations of flesh-and-blood individuals. However, we also stress that people's activities with algorithmic technologies contribute unintentionally to the collection of data of their physical bodies for profit-seeking and administrative ends. To

capture the power dynamics in question, we introduce the notion of sociotechnical power of ignorance that resonates with the idea of "technological unconscious". This form of power and its politics have less to do with cognition and absence of knowledge; what we have is gradual adaptation to mediated infrastructural rhythms in everyday life. The bodytechnical cultivation and taken-for-grantedness of these multiscale algorhythmicities, in turn, may prevent people from realizing and defending their fundamental rights in a meaningful way.

Critical, theoretical and feminist approaches to data in/securities

Data Visualization, Policy-Making, and Activism: The Case of Fertility in South Korea

C. Yoo

University of California, Irvine, Informatics, Irvine, United States

Content
The recent South Korean controversy regarding Chulsan Jido, a government designed online fertility map, demonstrates how assumptions about gender shape discourses around population and nationhood. Fertility data visualizations have a history in South Korea that started in the 1960's. These visualizations helped justify population control up until the 80s and, ironically, is currently utilized to shape discourses around the necessity of population increase. Against visualizations that leverage statistical data to establish low fertility rates as essentially a women's issue, alternative forms of visualizations on the theme of fertility, population, and pregnancy are developed by the public, including activist groups like BWAVE that attempt to decriminalize abortion. This essay presents archival research on the government's population research and fieldwork on activism in South Korea. It demonstrates how data visualizations can be thought of as something like boundary objects – objects that at once propagate hegemonic beliefs about fertility and at other times reevaluate problematic logics beneath those beliefs.

Critical, theoretical and feminist approaches to data in/securities

Queering the Data: Threats and Opportunities

K. Piwowar

SWPS University of Social Sciences and Humanities, Cultural Studies, Warsaw, Poland

Content
Recent development of research around algorithms and artificial intelligence has created a chance for fast and less prone to human error decision making. However, researchers point out different possible sources of bias that can skew these decisions. Extensive use of such data and systems raises ethical concerns, as well as the need for thorough research about groups being marginalized.
From the perspective of critical data studies, I discuss the ways in which the LGBT+ people are present in the data sets, what chances does the visibility have for them and what threats it poses. Since big data analysis has become another area in which non-heteronormative people are being excluded, erased or simply not present, I argue that visibility through data is not always a good and safe solution for them.
First, I review current research about queering the (big) data, looking for patterns in which the LGBT+ people are present in data. Through the lens of queer theory, I pose questions about the visibility and inclusion of non-heteronormative people, as well as its intended and unintended consequences.
Secondly, I review projects and efforts to include, visualize and rewrite LGBT+ biographies in the digital archives.
Finally, I argue that current data collection and analytical regimes are based on flawed assumptions with regards to gender and sexuality. Provided that history of data collection about LGBT+ people is a history of stigmatization and oppression I build a case for cautious and inclusive data collection policies, but most necessary, the informed ones.

Oral presentation

10:30 - 12:00   SFG 1010

Forensic data, human rights and refugees

Forensic data, human rights and refugees

Africanizing Forensic Genomics: Postcolonial Data Justice or Racialized Surveillance?

N. Tamarkin

Ohio State University, Comparative Studies, Columbus, United States

Content
Forensic science imagines justice through a carceral framework. But carcerality is rooted in colonial histories of racial domination. What happens, then, when forensic science is practiced in postcolonial contexts where concepts of social and racial justice coincide with entrenched ideas of criminal justice rooted in expanding data infrastructures? In January 2015, South Africa enacted a new law, the DNA Act, that mandated the creation of a national criminal DNA database, and that tasked the South African Police Service (SAPS) with building it. Over the past several years as SAPS has worked towards building data infrastructures to implement the DNA Act, university-based South African geneticists have also worked towards Africanizing forensic genomics. This paper considers the development of a new DNA profiler kit by researchers at a South African university, and the product's initial local reception. The kit, which has been marketed to but not yet purchased by SAPS, is based on a perceived need to better account for the genetic diversity of South African ethnic groups, with hopes to improve future iterations of the kit by expanding to other African contexts. Interestingly, it is not imagined in terms of profitability per se, but rather as socially important and legally responsible. Based on ethnographic research and interviews, this paper asks how competing forms of justice, racialized concepts of genetic diversity, and data securitization converge and transform one another in an emerging and expanding African forensic DNA data world.

Keywords: forensic DNA data, (in)security technologies, South Africa, postcolonial science, race and ethnicity

Forensic data, human rights and refugees

"Suspects by association": Familial searching and knowledge production in policing and criminal justice

R. Granja

Instituto de Ciências Sociais, Universidade do Minho, Departamento de Sociologia, Braga, Portugal

Content
Considering how crime is concomitantly constructed as a global insecurity worldwide, in this paper we address how forensic DNA technologies have increasingly entered the processes of knowledge production in the fields of policing and criminal justice. We do so by focusing on familial searching: a forensic technology that detects genetic relatedness between individuals with different types of involvement with the criminal justice system in order to identify possible criminal suspects.
So far, debates about familial searching have been mainly focused on the ethical, social and legal implications of using this technology in national forensic DNA databases. However, recent developments

have been showing how private recreational genealogy databases are being increasingly used with the purpose of accommodating the possibility of searching for criminal suspects. Such situation thus call for a thorough STS analysis that looks at the innovations, regenerations, successes and failures herein involved in the co-production of technological development.

Following high-profile criminal cases in Europe and USA in which familial searching was used and/or widely debated we explore how such technology not implicates everyone in the same way, but, rather, takes part of a system of "social sorting" by creating a new category of citizens: "suspects by association". That is, individuals possessing a distinctive biological that subjects them to a system that allows for indirect surveillance, even in the absence of individualized suspicion of previous or present behaviour. The current scenario of familial searching thus calls for an in-depth consideration of the meaning of social justice in a datafied society.

KEYWORDS: forensic DNA data; (in)security technologies; suspects by association, social justice

Forensic data, human rights and refugees

Refuting Eurocentric Narratives of (In)Securities. The Duty to De-Colonize the Other

S. Khan

University of Minho, Sociology, Braga, Portugal

Content
Many of our cultural repertoires emerge in spaces that are thought of as immaculate and non-corruptible by our prejudices, stereotypes that sustain our visions from the world of human experiences. Knowledge and the production of knowledge are inextricably linked to our geopolitical, social and cultural contexts, which in turn determine the criteria for the study and interpretation of the problems of the human and global world. Subjects such as security, surveillance, DNA tecnologies, crime, citizenship, refugee, migrant, assume a meaning inextricably linked to national and global political circumstances. In this sense, the Other is the construction and vision of a highly distorted and politicized perspective. Many of the distortions go through a Eurocentric stance that focuses on a colonial version of seeing the Other as less capable, less developed, and enormously prone to put our Western societies in jeopardy. This scenario permeates all quarters of a society and the social sciences are not less immune and innocent in this scenario. To decolonize implies assuming a moral discipline of a just recognition of the Other being part of a certain historical narrative, with cultural, social and political belonging that justifies our duty to understand the demand for a de-coloniality of knowledge. This work tries to think about a de-coloniality of knowledge in the social sciences. In order to materialize this intention, this paper will focus upon the meaning of the Other through crime and human rights perceptions in the Netherlands based on interviews made with different professionals.
Keywords: forensic DNA data; (in)security; human rights; eurocentrism; coloniality of knowledge; geopolitics of knowledge.

Forensic data, human rights and refugees

When imaginaries of security innovations meet imaginaries of insecure societies

N. Amelung, H. Machado

University of Minho, CECS, Braga, Portugal

Content
Key words: Forensic DNA data, in)security technologies, criminalized migrants, ethics, human rights

This article focuses on forensic genetic technologies used to investigate crime and explores social and ethical concerns as part of public understanding of innovations which differently render their social

legitimacy. The research questions addressed here are: how do collective perceptions of what is an adequate and proportionate balance between potential risks and benefits of forensic genetic innovations differ across political cultures, how do they relate to imaginaries of insecure societies and how thereby diverse notions of ethics and human rights become enacted. Using and adapting Jasanoff's analytical concepts of 'civic epistemologies' and Pfotenhauer and Jasanoff's 'imaginaries of innovation' we will analyze public understandings of forensic genetic innovations promising security and the corresponding public understandings and articulations regarding current security problems in societies in two countries. Based on qualitative interview data with diverse stakeholders we portray the situations in Poland and Germany. Although Germany's political dominant rhetoric increasingly welcomes the expansion of 'law and order' orientating forensic genetic innovation proposals, it also has recently experienced broader public controversy on emergent but contested forensic genetic technologies, also due to their claimed potential of criminalizing migrants. In Poland the prevailing political narrative emphasized the forensic genetics contribution to 'modernized' and improved efficacy of the criminal justice system and catching criminals. Forensic genetic innovations have been accompanied by silently assuming public acceptance and public trust in the proportionate use in the Polish surveillance system.

Forensic data, human rights and refugees

Big data and criminal investigation: ethical and operational aspects through the lens of sociology of expectations

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Content
Big Data refers to data sets collected, analyzed, converted into algorithms, categorized and identified through an index to inform and guide criminal policies. This cultural, technological, and academic phenomenon results from the interaction of technology (maximizes computational power and algorithmic precision), analysis (identification of patterns across a set of data) and mythology (widespread belief that large data sets provide intelligence). It is considered the indispensable way of research of the XXI century, being that the Social Science with data and intensive computing is a contemporary phenomenon.
Big Data intensifies surveillance associated with information technology and networks, anchored under computerized databases and artificial intelligence software that may serve public safety objectives. In the criminal sphere, it is a preventive tool that guides police strategies and criminal justice decisions, being considered a promising mechanism in the surveillance and prediction of risk in the fight against crime.
Big Data is seen as a powerful tool, offering the potential for new knowledge but is seen as a manifestation of Big Brother, allowing invasions of privacy, reducing civil liberties and increasing state and corporate control. In the last decades, the densification of technological systems has also been densely divided in debates about the social, economic, political and ethical implications of large-scale circulation and sharing of information and massive collection, use and sharing of personal data.
This presentation aims to present the results of a qualitative research carried out, through 126 interviews with National Contact Points, forensic geneticists, police officers, lawyers and actors involved in the implementation and operation of the network for the exchange of DNA data in the European Union. It was aimed, through the concept of Sociology of Expectations, to address the following research questions: What are the expectations from the different professionals about the potential applications of Big Data? What are their perceptions of potential benefits and risks? What expectations are collectively shared and specific among different professional categories?
The results allowed us to explore the different expectations about Big Data (as a potential criminal investigation tool in the early phase of implementation), as well as to identify and contribute to the contemporary debate on issues related to privacy and data protection.

Oral presentation

10:30 - 12:00   SFG 1020

Data activism, citizen engagement, indigenous data sovereignty and open data

Data activism, citizen engagement, indigenous data sovereignty and open data

(Re-)assembling data publics? Cases from open data, data journalism and data activism

J. Gray[1], L. van der Velden[2], L. Bounegru[3]

[1]*King's College London, Department of Digital Humanities, London, United Kingdom,* [2]*University of Amsterdam, Media Studies, Amsterdam, Netherlands,* [3]*University of Oxford, Oxford Internet Institute, Oxford, United Kingdom*

Content
The concept of "data publics" (Ruppert, 2015) has been used to describe the making and gathering of publics around data. Taking this concept as a starting point, in this paper we ask: What are data publics? Are there different kinds of data publics? What assembles them and holds them together? What does the concept do? How might it open up space for thinking about data politics?

Drawing on a range of different empirical vignettes from our previous and ongoing research on open data, data journalism and data activism, we aim to situate, conceptually unpack, critically explore and empirically specify the notion of data publics. We explore the ways in which data publics are assembled, configured, invited to act and act in ways other than expected. Drawing on perspectives in STS and media studies, we examine some of the different ways in which data publics are enrolled as witnesses, auditors, investigators, innovators and sensors, including through issues such as surveillance, climate denial, air pollution, and devices such as data portals, indexes, repositories, forums, kits and apps.

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Data activism, citizen engagement, indigenous data sovereignty and open data

From Data Politics to the Contentious Politics of Data

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Content
This article approaches the paradigm shift of datafication from the perspective of civil society. Looking at how individuals and groups engage with datafication, it draws upon the notion of data politics as defined by Ruppert, Isin and Bigo (2017), and complements it by exploring the "contentious politics of data". By

contentious politics of data we indicate the multiplicity of bottom-up, transformative initiatives interfering with and/or hijacking dominant, top-down processes of datafication, by means of contesting existing power relations and narratives, or by re-appropriating data practices and infrastructure for purposes distinct from the intended. Said contentious politics of data is articulated in an array of practices of data activism, taking a critical stance towards datafication and massive data collection. Data activism is characterized by the role of data as mediators, deployed as part of an action repertoire or as objects of struggle in their own right. Leveraging social movement studies and science and technology studies, this paper is illustrated with qualitative data collected in the framework of a multi-year project exploring the politics of big data from the perspective of civil society. It argues that data activism manifests itself along two continuums: data as "stakes" (that is, as issues/objects of political struggle in their own right) versus data as "repertoires" (or modular tools for political struggle), and individual practice versus collective action. The emergence of a political data subject in the realm of the civil society might lie at the intersection of these two dimensions.

Data activism, citizen engagement, indigenous data sovereignty and open data

OpenSCHUFA – shedding light on Germany's biggest credit scoring company

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Content
SCHUFA is Germany's dominant credit scoring company. It has immense power over people's lives. A low SCHUFA score means banks will reject your loan or credit card application, telecom companies will not give you a post-paid calling plan, and network providers will say 'no' to a new Internet contract. But what if your SCHUFA score is low because there are mistakes in your credit history data? Or if the score is calculated by a statistical model that is flawed? To find out if that is the case, we organised a crowd funding campaign that yielded almost 44,000 Euros, which we then used to build a data-donation platform for people to upload their scores (which are sent out via postal mail on paper). Collaborating with journalistic partners, the Open Knowledge Foundation Germany and an existing platform for access requests to data controllers, we convinced and enabled 3,500 people to donate their data. We OCR'd the data, cleaned and analysed it – and in the end, we found out so much about SCHUFA's flaws and mistakes that Germany's minister for justice and consumer protection demanded more transparency in credit scoring. We'll present insights form every phase of the 12-months research project and a variety of results, including an assessment of the inadequate oversight mechanism that is meant to police SCHUFA's procedures.

Data activism, citizen engagement, indigenous data sovereignty and open data

Algorithmic curricula on YouTube: empowerment or manipulation?

K. D. Wolf

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Content
YouTube is one of the most popular websites on the Internet. It has become the second largest search

engine and people across all age groups are using tutorials to learn skills and fix things. Therefore YouTube is an important informal learning platform, which people use for explanation and instruction.

When searching on YouTube for explanation videos and tutorials, the platform is providing users with individualized search result lists. If a user is for example interested in learning tapping as a soloing technique for playing e-guitar rock solos, YouTube will provide him or her with a algorithmically generated search result based on the current search term and prior individual YouTube usage. The result list shapes the possible learning paths a user can take. While the instructional goals of an individual video are created by the video producer (e.g. which learning should take place, what contents are important and what skills are to be acquired), the search result list and additional recommendation lists are produced on the fly without a human curated curriculum in mind. Thererfore, educational search result lists can be understood as an algorithmic curricula created by YouTube's search algorithm.

Because YouTube is a commercial platform and not an educational one, it is of importance to investigate if commercialisation goals are manipulating the learning aspiration of the users. Is the algorithmic curriculum empowering the user, because it helps to provide a supporting learning environment and find fitting and helpful content; or does the platform manipulate the users intent to learn to maximize engagement and advertisement exposure?

As a first step to answer these questions, this contribution analyzes systematically across different subject areas (1) how educational search results differ between individual users, (2) how search results differ to traditional curricula for the topic, (3) if search results and recommendations allow to dig deeper into a topic or lead away, and (4) how different engagement metrics such as clicks or comments correlate with quality of content.

Oral presentation

10:30 - 12:00   SFG 1030

Data, discrimination and inequality

Data, discrimination and inequality

Data, Discrimination and Inequality in Media Landscape: Russian Case

M. Pilgun

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Content

Introduction of the Web 2.0 created a new virtual discourse and caused dramatic increase of users activity. Communication on the Web has revolutionized written speech. This revolution is comparable to the invention of printing. Constitutive feature of media text in the modern integrated communications has changed. Semiotic aspect is now most important due to synergic effect caused by combination of verbal, audio and visual components.

Media, business structures, non-commercial organizations and research institutes are now in search for so-called sensemakers, that is, specialists who can manage enormous amounts of data, analyze these data and present them in formats convenient for understanding and assessment.

Still Mark, Laurence (http://www.mirkolorenz.com/?id=6) identified 4 stages in the process of processing and reporting in the media: reception, filtering, visualization of data and building stories based on them. It is important that the data used in this process is open source and that data analysis tools are distributed under a free, open source license. Only then will all participants in the communicative process and data analysis process be based on an access policy, which means unrestricted access to data and analytical tools for data analysis.

Original scheme suggested by Bed Fry (http://benfry.com/) describing multi-level process of transition from raw data to human understanding of these data, can hardly be sufficient for optimal perception of information transmitted in media text in Russian-speaking environment.

Meanwhile, in the Russian-language media space, data are often used not to create objective and truthful stories, but to manipulate public opinion.

The report will analyze examples demonstrating data manipulation in the Russian media. Data become a resource for creating fake news, false information, opportunistic assessments in the coverage of events and the formation of an inadequate world views.

Data, discrimination and inequality

The Effect of Perceived Political Bias on the Use of Machine Learning by Governments: Exploring the Ethical and Moral Dilemmas

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Content

Governments around the world are investing in open data portals and opening up their data with a belief that

it will lead to increased transparency, higher levels of accountability, and drive new innovative services. At the same time, there has been increased interest in harnessing the power of machine learning to drive government efficiency, effectiveness, and reduce administrative burden. Thus, it follows, that there is likely to be government sponsored machine learning services that rely or utilize open government data sources. However, it is also widely agreed upon that there is a potential for bias in machine learning algorithms due either do the data that was consumed during training, or due to an issue with the code behind the algorithm's implementation itself. This paper aims to examine the issue of bias, but in a specific situation, that of government agencies. Whereas in the private sector this bias has been largely ignored or dealt with in a not-completely-transparent manner, government agencies utilizing open government data and machine learning must hold themselves to a higher standard as being accused of bias, racism, or persecution by constituents is a constant possibility. This paper aims to explore this issue by asking what are the ethical and moral issues at play when utilizing open government data in machine learning based services by government institutions? To address this question, a case study of Montgomery County Maryland is presented where a machine learning model based on open government data was trialed, but ultimately canceled due to a potential accusation of bias.

Data, discrimination and inequality

Biased Digital Trails in Learning Management Systems

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Content
Building individually optimized and digitalized learning environments is one of the primary goals of learning analytics, a field of research that grew immensely in the past decade. The reason for this is that researchers hope to be able to face challenges of education systems, such as retention and learner support, by making use of digital trails left by students (Siemens, 2013). These could consist of data produced through the use of mobile devices, learning management systems (LMS) or social media (Siemens, 2013)
However, it has been shown that socio-demographic differences lead to different preferences or requirements of design in learning management systems (Lim, Ayesh, & Chee, 2013) and they might lead to different usage altogether. This might lead to a bias in the classification algorithm of students at risk of dropping out or students in need of interventions, which in turn could lead to a discrimination against specific ethnic or demographic groups.
We would like to investigate the discrimination potential of machine learning algorithms in Moodle data, where Moodle is a leading learning management system.
In order to reproduce a typical application of machine learning algorithms to LMS data, such as in (Sweeney, Rangwala, Lester, & Johri, 2016), and quantify the risk of discriminatory tendencies being transferred into the algorithm, we will observe the Moodle data of students of the HTW Berlin. For this, we would like to use the Moodle data of students from the course "Controlling" during the winter term 18/19.

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Data, discrimination and inequality

Tumblr's Fandometrics and the metricization of online communities

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Content

In 2015, Tumblr launched Fandometrics, a metrics project that posts weekly fandom rankings for TV shows, movies, music, video games, 'ships,' and more. Tumblr describes the rankings as representing "each fandom's influence across Tumblr." This influence is determined with a measurement that does not account for sentiment and yet provides prominence and voice to the 'loudest' fandoms. We conducted interviews with key fan data experts and analysis of the Fandometrics site, user discourse, and trade and popular press. Building on work on audience measurement (Ang, 1991; Baym, 2013) and the changing social role of metrics (Beer, 2016; Kennedy, 2016), we argue Fandometrics encourages social jostling by online communities for relevance on the Tumblr platform, and within fandom and wider culture. By equating the strength of communities with their status as influencers or markets, the platform ushers communities toward subjectivities that value quantitative rankings as germane to inherent societal value and inter-community relationships. For example, Tumblr reminds users that if their fandom does not secure a suitable spot in the weekly rankings, it is their fault for not 'engaging' on the site sufficiently. Some users show disappointment and sadness when realizing they are part of a fan community too small to ever be included in the rankings. Other users ridicule rival fandoms for engaging 'incorrectly,' for example by making 'anti' posts that unwittingly shoot their rival fandoms up the rankings. The Fandometrics phenomenon reflects larger anxieties about value, relevance, and power in increasingly metrified online spaces.

Oral presentation

10:30 - 12:00   SFG 2020

DATAFIED: DATA For and in Education – The construction of school in a datafied society

DATAFIED: DATA For and in Education – The construction of school in a datafied society

DATAFIED: DATA For and In Education - The construction of school in a datafied society

A. Bock[1], A. Breiter[2], S. Hartong[3], J. Jarke[2], S. Jornitz[4], F. Macgilchrist[1]

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Content

The DATAFIED joint research project investigates how the construction of schooling is changing as formal education is becoming increasingly datafied. The DATAFIED team examines both administrative and classroom data practices in four German federal states and eight case study schools in four major cities. It observes how the availability of digital data through information and monitoring systems as well as learning software is entangled with shifting roles, professional practices and social / pedagogical relationships. The project explores how people and systems deal with data and to what extent the school is being de- or reconstructed as a result of these (increasingly professionalised) data practices.

In our session we introduce the joint research project, highlighting the individual projects´ theoretical and empirical assumptions:

1) School administration, monitoring and leadership; examines the interface between school authorities and the school. It aims to identify potential changes in the relationship between these organisations that materialise through digital and data technology implementation: in particular with regard to (external) evaluation and consultations for school/classroom development.

2) School management and information systems; considers the information systems used by school management. It asks how the organisation of schools is being altered by the use of data and algorithms and what role software developers play.

3) Digital learning software and data practices; unpacks the digital tools used in classrooms, analysing the interface between digital learning software and classroom practice. It asks how the software prefigures data practices, educational priorities and teacher and student roles.

4) Data Practices of Teachers and students; studies the interface between teachers and students in the classroom. It explores media use and the associated data gathering, monitoring and analysis, and examines the shifting relationships and teacher and student roles within the classroom setting.

After a short impulse on the project interests, we introduce a "dare-to-ask-conversation" where the project partners invite the audience to discuss data practices and their socio-political implications. In this sense, we regard our session as an invitation to further academic exchange.

DATAFIED: DATA For and in Education – The construction of school in a datafied

society

School administration, monitoring and leadership

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Content
So far, research in Germany has primarily dealt with the question of whether educational actors in school supervision and school "actually" work more evidence-based or how they can be introduced to a better use of data (e.g. by supporting advisory actors) (Altrichter 2010, Rürup et al. 2010, critically Heinrich 2017). The process of datafication, on the other hand, has received relatively little attention so far. Against this background, we examine how the relationship between school supervision and schools changes through the stronger involvement of data infrastructures (e.g. by consulting data dashboards that visualise data from school inspection, tests etc.). In particular, we focus on the practices of external evaluation and school/teaching development counselling.

In a first step, we analyse how external evaluation and school/classroom development as parts of school supervision can be located in the respective cases, how school supervision, school ministries and teacher training institutes relate to each other and how the institutional structure and also the activities of school supervision have changed in the course of increasing data processing. Subsequently, in a second step, we examine which data practices external evaluations as well as school/classroom development consultations are carried out in the respective cases. Building on semi-structured interviews with supervision agencies and schools (headmasters and teachers), we ask which role(s) which kind of data play in such practices and how it is (critically) reflected on.

DATAFIED: DATA For and in Education – The construction of school in a datafied society

School management and information systems

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Content
Data-based decision-making has become an influential practice for the organisation of schools (Breiter & Light 2006; Mandinach 2015; Piety, 2013; Schildkamp, Lai, & Earl, 2013). Digital educational data is collected, processed and prepared for dissemination within school information systems. Increasingly, decisions are delegated to database-driven analysis software (Ferguson, 2012; Siemens, 2013). This raises questions about the role of actors who have the power to interpret algorithms and educational data. However, data providers (software companies, government and non-government research institutions) are often behind the scenes. Our springboard for our approach is therefore the observation that the increasing digital data acquisition fundamentally changes the management of schools, but that the critical examination of data infrastructures does not receive sufficient (scientific) attention.

We therefore analyse how the school as an organisation is changing through data and algorithms and what role software engineers play in this process. We look at the changes in school management through the integration of data infrastructures and educational rankings. In a first step, the school information systems offered or developed in the respective federal states are examined, involved actors (e.g. software developers, software providers) are systematically identified and a first document analysis of the existing software specification is carried out. Secondly, drawing on software studies, using an explorative approach of reverse engineering (Chikofsky & Cross, 1992; Demeyer et al. 2008), we examine the school information

systems. From this, knowledge about the implemented data model and the software architecture is derived. Building on this, in a third step, we interview programmers and system designers. Finally in a fourth step we conduct interviews with users of school information systems in the researched schools in order to survey how school information systems are used and what local solutions exist.

DATAFIED: DATA For and in Education – The construction of school in a datafied society

Digital learning software and data practices

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Content
So far, research on digital teaching media in German-speaking countries has focused primarily on the impact of digital vs. printed materials on pupils' learning outcomes (Merkt et al. 2011; Hahnel et al. 2017); on quality assurance in digital media, which are not provided by the federal states or the German states; and on the impact of digital vs. printed materials on pupils' learning outcomes (Merkt et al. 2011; Hahnel et al. 2017).ä. (Matthes et al. 2015; Pjanic & Hamzabegovic, 2016); or on the role of big data, software and learning analytics for media education and didactic education (e.g. Eder et al. 2017; Cheng & Leong 2017; Gapski 2015).

The fundamental question of the construction of schools and social and pedagogical relationships remains underestimated when textbooks and blackboards are increasingly replaced by digital teaching media such as learning software (cf. Ball & Youdell, 2009; Schön & Ebner 2013; Höhne, 2013; Macgilchrist 2017). Currently, adaptive and personalized learning software - which prepares, analyzes, visualizes, and makes usable dynamically generated digital data in a novel way and in real time is considered to have a particular impact on everyday life in schools (Williamson, 2018). In addition to the established research on the optimisation of this adaptive learning software and its impact on specific learning outcomes (Peña-Ayala 2016; ElAtia et al. 2016), the question of its impact on the understanding of education and the objectives, roles, relationships and tasks of teachers and pupils in Germany remains largely unanswered.

Refering to this lacuna we focus on changes in the relationships between software providers and classroom teaching through the integration of new data-based, digital teaching media in everyday school practice. We analyse these changes on the basis of adaptive and personalized learning software. In a first step, we identify relevant products used in the researched schools. In step two we review documents about the learning software and interview developers and management. In a third step, the learning software will be analyzed to identify the individual system components and their relationships and to derive findings about the implemented data model, the software architecture and the socio-material-technical constitution of the software. Subsequently we conduct interviews with teachers and group interviews with students to identify their views on data practices.

DATAFIED: DATA For and in Education – The construction of school in a datafied society

Data practices of Teachers and students

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DIPF | Leibniz-Institut für Bildungsforschung, Frankfurt, Germany

Content
The project studies the interface between teachers and students in the classroom with regard to digital media use and the associated data gathering, monitoring and analysis. A central aspect will be the shifting relationships between teacher and student within the classroom setting. Most of qualitative education research focuses on the antinomical structure of teaching, the interdependencies of education, "Bildung" and didactics and the role of media in teaching (Ahlrichs & Macgilchrist 2017; Gruschka 2009; 2013; Helsper 2002). But less effort has been made to study the daily routine of digital media use in the classrooms so far (cf. von Gross, Meister & Sander 2015; Marotzki & Meder 2014).

Three theoretical perspectives are leading. First, based in the theory of professionalization of Ulrich Oevermann (1996) we will ask how the implementation of digital media in teaching and the gathering and procession of data on teaching and learning will have an impact on the role of the teacher. Second, based in the theory of teaching, we are interested to know how software use is de-personalising the process of teaching and will therefore change the roles of students, teachers and their relationships. By using such kind of "learning data" (Lupton & Williamson 2017) teachers and students will get numerical feedback in a way that was not possible before. Third, based in the theory of media use, we will look up, if digital media are able to contribute to the learning process including stimulating critical thinking (Marotzki & Meder 2014).

The project will record school lessons in four schools in four different cities of Germany. Methodologically we draw on an ethnographical and a hermeneutical-reconstructive approach ("objektive Hermeneutik" nach Oevermann). By going into deep analysis we will contribute to the different theories and come up with types of teaching under digital conditions.

Oral presentation

10:30 - 12:00   SFG 2030

Data-driven governance and open data

Data-driven governance and open data

Governing Digital Cities: Dataveillance, Preemption, Speculative In/Securities

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Content

This paper explores techniques of urban governmentality that are emerging from the increasing digitalisation and datafication of cities. Drawing on examples from research conducted in New Town Kolkata (India) and Cape Town (South Africa), I examine platforms where predictive analytics and automated decision models shape practices and policies of urban security. I then discuss the logics that operate through these platforms and, more specifically, the relations between dataveillance, preemption and speculative politics. Critiques of smart cities draw attention to the practices of extensive monitoring, privacy violation, and potential (or actual) behavioral manipulation that come with data-driven urban systems. This is, I argue, a necessary but insufficient perspective. As Louise Amoore (2013) and Marieke De Goede (2012), have pointed out, analytics operations are highly speculative, in two ways: because they move across abstractions, seek to draw the unknown into probabilistic calculations, making a range of possible futures actionable in the present; and because they always stem from specific context and instructions that are biased and politically charged. Agnieszka Leszczynski (2016) describes how cities are increasingly governed through algorithmic speculation, as analytics looks to the future through the lens of an anticipatory security calculus that seeks to identify specific risks against which preemptive action must be taken. Building on these lines of research, I investigate how dataveillance, preemption and speculative security interact in the governance of cities; and how they perform patterns of discriminations along race, gender, class and cast lines.

BIO
Ilia Antenucci is completing her PhD at the Institute for Culture and Society, Western Sydney University, where she works with Prof. Brett Neilson. Her research focuses on urban digitalisation and security.

As a PhD student, I would like to be considered for a conference fee waiver.

Data-driven governance and open data

Questioning Data Power. A Participatory Empirical Research Approach to Inquiring Government Data Practices

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Utrecht University, Utrecht Data School, Utrecht, Netherlands

Content

While the emergence of data practices and the application of algorithms for decision making in public management have led to a growing critical commentary (e.g. Pasquale 2015; O'Neil 2016; Eubanks 2018; Hintz, Dencik, Wahl-Jorgensen 2019), little actual empirical research has been developed. Over the past

years we have developed a research method that enables researchers to enter the organisations not merely as researchers but as experts on data ethics. This method borrows from both Participatory Action Research and the tradition of empirical philosophy. In this capacity researchers are able to gather insights and empirical data through participatory and ethnographic observation: insight into planned or running data projects, operational capacities concerning data practices, awareness for values and data ethics, modes of moral justification and how data practices affect the organisation at large. This paper discusses methods of investigating social impact of technology and in particular the inquiry of data practices. Building on different groundbreaking methodological approaches (such as e.g. Jahoda, Lazarsfeld, Zeisel 1933/2017; Latour and Woolgar 1979; Mol 2000; Boltanski & Thévenot 1991) this paper discusses a method that combines empirical philosophy and participatory action research for the inquiry of the emerging datafied society.

Data-driven governance and open data

Documents, Data, Flows: Impact of India's recent digital governance initiatives

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Content
In the last decade, progress and aspiration of the Indian nation state has been marked by an evocation of digital technologies and solutions to address socio-economic challenges. Following the National e-Governance Plan (NeGP) in 2006, recent policies drive the implementation of information technology and digitally enabled government-to-citizen services, with a key focus on bringing these services to rural and typically remote locations. At present, basic G2C services, social welfare schemes and inter-departmental transactions are completely digitized and processed (sometimes solely) through state- developed websites and portals.

In this paper, I trace the trajectories of building a comprehensive digital governance structure, focusing on the contact points where digital space and bureaucratic processes intersect. Based on ethnographic fieldwork, I follow regulatory, bureaucratic and local level actors, each provisioning legitimacy and access to e-governance at different scales, thereby making bureaucratic processes permeable (or not) to digital workflows. I examine if layering existing governance processes with digital workflows results in a radical mutation of typical bureaucratic imaginations, or a mere rearrangement of its resilient forms and hierarchies. If channels for citizen's claims-making are increasingly digitized and are made to flow as data, what is the consequence for them when accountability and culture of governance have not been updated to match digital affordances.

Moving beyond an evaluative gaze, I examine the logic that new digital technologies operate within these projects and the resulting processes of nation-state spatialization (Gupta & Ferguson 2002). Ultimately, the aim is to develop a theoretical sensitivity to digitization and datafication that is increasingly underscoring neoliberal reforms in the nation, and the modalities through which it alters the experience of citizenship vis-à-vis changing governance strategies.

Data-driven governance and open data

Bureaucratic Vision: Promises of Data-driven Seeing in Moments of Crisis

L. Horgan[1], C. Lin[2]

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Content

During a recent natural disaster, policymakers in Los Angeles, California scrambled to assemble an interactive map containing all available emergency management data. Across the Pacific Ocean, earth scientists in Jakarta, Indonesia pushed pixels to align conflicting forest borders in a single, digital map of the nation's 18, 307 islands. Such mapping exercises, particularly in the era of big data, become an occasion to synchronize and "layer" multiple, disparate intelligences onto one another, with the promise of revealing insights for compounded issues. Similar to Strathern's (2000) depiction of "transparency" in audit culture, there is an understanding here that boundaries and performance can be observed, measured, intervened into, and improved upon once rendered. In the making of data-driven transparency, complex reality is streamed and framed for bureaucrats to determine commensurability via virtual contact. Drawing from two sites—a 12-month ethnographic study of state-contracted computer and earth scientists in Jakarta, and a two-year participant observation study with the LA Data Team—we name this mode of socio-material deliberation "bureaucratic vision." Bureaucratic vision is located in the situated and contested practices of matching and indexing quantified, visualized elements. These elements are frequently mobilized for political decision-making in manufactured moments of crisis. Visuality is not the sole conduit of knowledge in this always-on, data-driven vision. Rather, a logic of interoperability and anticipatory layering drives bureaucratic seeing. Observation is thus made habitual, recursive, and externalized; the observer is able to point to a problem in the data, but never a problem of it.

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Critical, theoretical and feminist approaches to data in/securities

Critical, theoretical and feminist approaches to data in/securities

The reconfiguration of value in data capitalism

G. Bolin

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Content

Informational capitalism, as theorised by e.g. Castells, introduced information at the centre of the capitalist dynamics of value generation. As information today has increasingly taken the form of data, there is a profound need to understand the possible changes in this dynamic, and to theorize the reconfiguration of value and the power relations at the heart of data capitalism.

Data capitalism, manifested in the economic dynamics of its business models, arguably rests on three underlying sub-dynamics: an *epistemological dynamic* focussed on increasingly sophisticated means of knowledge directed towards the social, in turn closely related to a *technological dynamic* tied to digitisation that is the basis on which knowledge is constructed and which facilitates economic transaction, both of which directed towards the social. This means that they are confronted with a *social dynamic* among those who ultimately generate data.

These dynamics are based in specific *value orders*, each centred on a specific value form (economic, social, technological, epistemological, etc.). But what happens to the basic values of the social world (eg. belonging), when it is colonised by intelligence-collecting technologies within the frameworks of business dynamics? The dynamics that arise from these processes affect value creation at all levels and dimensions of media production and consumption and should be of great concern for how we understand the power relations within both the media/data industries and among everyday media users. This paper will discuss the interrelation between these dynamics and propose a set of analytical approaches to empirically study data capitalism.

Critical, theoretical and feminist approaches to data in/securities

Fintech Apps in Hong Kong: Data and Speculation in the Face of Precarity

R. Hoyng

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Content

In Hong Kong—a colony turned neoliberal testbed—fintech apps (financial technology applications) target those who experience various forms of precarity, such as millennials (i.e. students), elderly housewives, and migrant domestic workers. This paper analyzes their situated experience of datafied finance in terms of the interplay between openness, exposure, enclosure, and foreclosure across the data-centric epistemologies and aesthetics of front-end interfaces and back-end algorithmic systems of data mining and exploitation. For

instance, fintech apps promise openness in the sense of transparency and access to financial opportunities by redistributing data-centric perception and cognition. Yet at the same time, they enclose data and foreclose futures by subjecting users to algorithmic credit-scoring and social sorting (Lyon 2003). The reduction through datafication and subjection to AI can however shift into more erratic forms of harm associated with exposure when we consider vulnerability in the face of the ungovernability of data mobilities and the random heteronomic determination of user subjectivity via AI (Lotti forthcoming; MacKenzie 2014; O'Neil 2016; Pasquale 2015; Speculate This! 2013). This paper explores three "classes" of users defined by the opening/enclosing/foreclosing effects of distributions of data-centric perception and cognition. These are the predicting class equipped with robo-advisors; the predicted class that self-identifies through credit-scoring; and the unpredictive class, negotiating exclusion and anonymity. Second, I juxtapose articulations of uncertainty as quantified expression of risk versus as cultural signification and affective experience of precarity. I ask whether and how personal data could conjure publics and tell stories that defy social sorting and foreclosure by recovering the openness of the future while enabling new relations of solidarity. Methodologically, this paper draws on walkthrough methods for app analysis and interviews with fintech designers and users in Hong Kong.

Critical, theoretical and feminist approaches to data in/securities

Ecologies of Data Power: Drones and Environmental Firmware

A. Fish

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Content
Neither software nor hardware exist. There is only firmware that connects the two. The notion of firmware as a blur, entanglement, or hybridization of hardware and software with effects in the external world is essential for the development of unmanned aerial vehicles or drones that are software governed hardware systems interacting with and ultimately influencing ambient environments, atmospheres, and ecologies. This is an example of environmental firmware: a material confluence of hardware and software in projects that monitors, transform, and seek to control humans, non-humans, and indigenous spaces. Environmental firmware is a supreme form of data power with serious consequences for global insecurity.

In this talk, I introduce environmental firmware by examining a recent ethnographic encounter with civil drones that use computer learning in ecological conservation. The result is an expansion of the notion of data power to include a materialistic critique of how data is generated by environmental firmware and a theory about how data power applied by environmental firmware impacts other species and ecologies. By ignoring the implications of this expanded notion of environmental firmware, data power is anthropocentric. It is something that happens only because of and to humans. However, because of remote sensing nature has become another quantified and modified self. Ecological firmware's aspirations to control natureculture--as enacted by atmospheric platforms such as drones--is of tantamount importance to understanding global in/securities in the Anthropocene.

Critical, theoretical and feminist approaches to data in/securities

Forms and Constellations of Power in the Data Society

D. Houben

TU Darmstadt, Darmstadt, Germany

Content
Data are valuable resources. Hence, the control over large amounts of data inevitably creates a position of power. As straightforward as this diagnosis is, however, it often leads to a reduction and reification of the

manifold forms of power inherent to the data society and, in extension, to an overly simplistic, dichotomous contrast between the large data companies and the rest of the world.

Instead, I suggest that power constellations be understood as networks of dependences between specific actors or their relative positions. Against this backdrop, four ideal-typical forms of power can be reconstructed for the global data society, each characterized by its own interdependencies and, moreover, by particular strategic potentials to exert influence:

(i) (Infra-)structural power refers to the opportunity to design and control the technological infrastructures of data practices.

(ii) Regulative power is the opportunity to impose legally binding rules and to legitimately sanction them.

(iii) Symbolic power refers to the chance to give data a symbolic significance, a cultural value and social meaning, which in turn shape the perception and interpretation of the data.

(iv) Passive power, finally, is hold by actors who use data-driven services and whose behavior is measured or transformed into data.

As I will demonstrate for the case of public private partnership, this heuristic, firstly, can be used to conduct differentiated analyses of complex power constellations, which, secondly, stress the global quality of power in the data society, and, thirdly, allow to derive hypotheses for further empirical investigations.

The Co-Evolution of Exploitation and Power in an Age of Algorithmic Society

The Co-Evolution of Exploitation and Power in an Age of Algorithmic Society

Panel Abstract: The Co-Evolution of Exploitation and Power In an Age of Algorithmic Ubiquity

D. Leslie[1], F. Ostmann[1], J. Cowls[1, 2], C. Hitrova[1]

[1]The Alan Turing Institute, Public policy programme, London, United Kingdom, [2]Oxford Internet Institute, Oxford, United Kingdom

Content
In our cyber-physical world networked apparatuses of countless sensors, actuators, and nodes of continuous behavioural measurement and manipulation intermingle with ubiquitous algorithmic systems and cloud computing platforms. Digital and material realities shade off into each other to the point of indistinction. In this interstitial condition, algorithmically personalised services reach into the unwitting private lives of targeted data subjects and have an active curatorial hand in identity formation, while opaque computational methods of relevance-ranking, popularity-sorting, and trend-predicting produce calculated digital publics bereft of any sort of participatory social or political choice.

In this panel we will explore how the emergence of such a dynamic, subtle, and pervasive digital infrastructure has prompted the co-evolution of exploitation and power in an algorithmically administered society. Exploitation and power are interrelated social forms in human and non-human associations. Even a small change in the character of one prompts a correlated change in the character of the other. Today, new means and devices for exercising power or exerting authority raise new possibilities for the manifestation of exploitation. Although the normative syntax of exploitation and morality may remain fixed, the ongoing sociotechnical changes have transformed both the means of infliction and the channels of rectification. The primary focus of the conversation we intend to motivate will thus be on discerning and analysing how the particular socio-political transformations brought about by the rapid proliferation of humanly-targeted computational means of prediction and classification are signalling significant changes in the co-evolutionary nature of exploitation and power themselves.

The Co-Evolution of Exploitation and Power in an Age of Algorithmic Society

Exploitation and Transactional Fairness in the Service-for-Data Economy

F. Ostmann

The Alan Turing Institute, London, United Kingdom

Content
Note: This paper is part of the proposed panel 'The Co-Evolution of Exploitation and Power in an Age of Algorithmic Ubiquity'.

Many online service providers, including big platforms such as Facebook and Google that provide services for free, rely on what may be referred to as the service-for-data business model, whereby providers' revenue

depends on the collection and processing of user data. What different variations of this model have in common is that they can be described as relying on an exchange of service for user data.

This service-for-data business model is increasingly viewed critically. One of the prominent complaints is that the model can be exploitative. The aim of my paper is to shed light on this idea. In particular, I intend to show that, while there are cases of exploitative service-for-data exchanges that are objectionable in virtue of a lack of informed consent or harm to users, charges of exploitation are not limited to such cases. The conceptual key to this insight is the idea that consensual and mutually beneficial exchanges can be exploitative insofar as the transacting parties' respective amounts of benefit reflect unfair terms of exchange.

Having introduced this idea of transactional fairness, I will highlight its implications for several governance questions. These include the alleged significance of the fact that, for many users, the subjective value of using platforms like Facebook seems to outweigh the subjective disvalue of sharing their data; the issue of what price should be considered appropriate if providers were to offer fee-based alternatives; and, in the context of anti-trust policy, possible

The Co-Evolution of Exploitation and Power in an Age of Algorithmic Society

The Fifth Face of Power: A Critique of Algorithmic Violence

D. Leslie

The Alan Turing Institute, Ethics/Public Policy Programme, London, United Kingdom

Content
This paper is part of the proposed panel The Co-Evolution of Exploitation and Power in an Age of Algorithmic Ubiquity

In the opening lines of his essay, 'The Critique of Violence,' Walter Benjamin draws a direct link between the task of a critique of violence and the ethically and juridically implicated social forms through which the causal nexus of force, resistance, and reaction transforms itself into an exercise of authority. 'For a cause, however effective,' he writes, 'becomes violent, in the precise sense of the word, only when it bears on moral issues.' Benjamin's insight carries special relevance in the age of computational ubiquity. Personally targeted by subcutaneous algorithms that profile, curate, and manipulate, data subjects have become unsuspecting quarry for the extractive machinery of surveillance capitalism. Likewise, as automated decision-making systems have reached ever deeper into the administrative bowels of social service provision, poverty management, and predictive risk assessment, individual persons have become increasingly subjected to the unquestioned authority of depersonalised algorithmic intervention. Common to all of these instances is a new and unprecedented moral problem: even as the potentially injurious results of these computational exploits have direct, personal, and hence ethically implicated effects, the statistical and probabilistic AI models behind them are themselves not responsible moral agents, thereby leaving adversely affected stakeholders literally in a moral 'no man's land'.

This new moral problem implies a new form of violence: The hyper-personalised exercise of power by a totally depersonalized (quasi)agential apparatus. I will argue in this paper that such a novel form of algorithmic influence represents a 'fifth face' of power. Building on the 'faces of power' literature explored by thinkers from Dahl, Polsby, Barach and Baratz, and Lukes to those who apply Foucauldian categories, I will show that, beyond the first four faces (decision-making, agenda-setting, ideological, and normalising power), this form of direct structural violence must ultimately be classified as malum in se, evil in itself. I will conclude that a critique of algorithmic violence involves not only a careful exposure of the causal effects of computational biopower; it involves the exploration of a new space of possibilities for moral and legal rectification.

The Co-Evolution of Exploitation and Power in an Age of Algorithmic Society

SSI as a Tool for Digital Identity Rights: Towards Empowering Individuals Online

D. Leslie, C. Hitrova

The Alan Turing Institute, Public policy programme, London, United Kingdom

Content
This paper is part of the proposed panel "The Co-Evolution of Exploitation and Power in an Age of Algorithmic Ubiquity."

Upon our birth we are endowed both with a personal identity and with rights to protect it. Our personal identity is secured through certain codified entitlements such as the right to privacy, to self-expression, as well as to the inviolability of our personhood. Yet, once we enter the virtual world, this protection ceases. Instead, when we become data subjects through accessing service for data platforms, we are faced with a world of subversive digital profiling, nudging, and steering—a world that targets and objectifies individuals as waypoints to the monetization of the data they generate.

This paper will explore the role that a digital self-sovereign identity (SSI) – a blockchain-based identity management tool – can play as a means for citizens to exercise digital identity rights online at a time when states failed to effectively regulate and enforce such rights on an international level. We will study the current state of SSI research and deployment and will critically look at whether and how the technology could help empower individuals online, in particular by protecting the rights to privacy, personal inviolability and expression online – the same rights that protect our personal identity offline.

We envision that creating a commonly-used technological means for the exercise of digital identity rights could balance the bargaining power between individuals and digital businesses. This would have far-reaching consequences for revolutionising the treatment of individuals online.

The Co-Evolution of Exploitation and Power in an Age of Algorithmic Society

The Silicon Cage: "Legitimate" governance 100 years after Weber

J. Cowls

The Alan Turing Institute, London, United Kingdom

Content
This paper is part of the proposed panel The Co-Evolution of Exploitation and Power In an Age of Algorithmic Ubiquity.

In "Politics as a Vocation", the lecture that he gave one hundred years ago, Max Weber offered what would become one of his most influential ideas: that a state is that which "claims the monopoly of the legitimate use of physical force within a given territory". Such use of violence, Weber argued, is legitimated in one of three distinct ways: by "tradition", by "charisma", or by the "virtue of 'legality' … the belief in the validity of legal statute … based on rationally created rules".

In this centennial year of Weber's lecture, much has been made of Weber's prescience regarding modern-day charismatic demagogues. Yet it is in the conceptualisation of "legal-rational" legitimacy that greater purchase may be found when we grapple with the use of data and algorithms in contemporary society. As I will argue, the "iron cage" that Weber identified, which serves to constrain human freedom through the coercive combination of efficiency and calculation, has been supplanted. Today, we instead occupy what might be called a "silicon cage", resulting from a step change in the nature and extent of calculation and prediction relating to people's activities and intentions.

Moreover, while the bureaucratisation that Weber described was already entwined with a capitalist logic, the silicon cage of today has emerged from an even firmer embedding of the tools, practices and ideologies of capitalist enterprise in the rules-based (we might say algorithmic) governance of everyday life. Alternative arrangements present themselves, however, in the form of both "agonistic" and "cooperative" democracy.

Reference

Weber, Max. 1946. "Politics as a Vocation." Pp. 77–128 in Gerth, H. and Wright Mills, C. (Eds.), From Max Weber. New York: Oxford University Press.

Oral presentation

13:00 - 14:30   SFG 1030

Data, discrimination and inequality

Data, discrimination and inequality

Data and Social Justice Panel paper 1: Data-driven hiring, labour relations, and social justice

J. Sanchez Monedero

Cardiff University, Cardiff, United Kingdom

Content

The dual occurrences of constant data collection and use of artificial and autonomous systems in the workplace are having a profound impact on labour relations and workers' lives. Whilst much focus on the interplay between data processes and work has centered on the advent of the gig economy and platform labour, companies across the board are intensifying data collection and algorithmic decision-making to optimize productivity, implement marketing campaigns or forecast events relating to their business. A particular area of transformation is in the organization of human resources and hiring practices where aspects of sourcing, screening and ranking, interviewing and selecting potential candidates is increasingly permeated with automated data processes. This paper provides an overview of key developments in data-driven hiring in Europe and outlines the nature of tasks being automated, the sources of data, and the role of predictive analytics in this domain. It will specifically point to the growing information asymmetry that accompanies the advent of datafication in relation to human resources, in which there is a significant increase in the information employers gather about potential candidates and a growing dependency on extensive profiling practices. The paper will assess how these developments transform labour relations through new stratifications of power, dehumanization and the simultaneous potential for both a reduction and amplification of 'bias'.

Data, discrimination and inequality

Data and Social Justice Panel paper 2: Predicting criminals; reinforcing social injustices through the construction of data classes

F. Jansen

Cardiff University, Cardiff, United Kingdom

Content

Initial debate on mass surveillance have centred on questions of privacy and data protection, overlooking the larger social, political and economic questions surrounding the integration of surveillance platforms across government, business and civil society (Dencik et al, 2016). I will use data driven policing in Europe to illustrate how growing power asymmetries and increased dependency on surveillance platforms are constructing new data classes which lead to new structural injustices in society. This article situates data driven policing within the ideology of datafication (van Dijk, 2014), its political and economic drivers (Zuboff, 2015), and build on Manovich's (2012) and Andrejevic's (2014) notion of data classes to create a more nuanced understanding of the relationship between target communities, law enforcement and surveillance platforms. Based on examples from my fieldwork in Amsterdam on the use of predictive systems to identify

and rank potential criminals, this paper questions how the implementation of these systems reinforces and obscures social injustices.

Data, discrimination and inequality

Data and Social Justice Panel paper 3: Data (in)justice at the border; embodiments of datafied border regimes in Greece

P. Metcalfe

Cardiff University, Cardiff, United Kingdom

Content
The use of biometrics and personal data for identification, categorisation and way of accessing fundamental rights has become integral to global asylum procedures. Also, as border control in Europe further cements itself within a risk analysis and security model, with an onus on the possibilities of EU wide migration databases, algorithmic risk analysis and surveillance technologies to further tighten controls, datafied border regimes are becoming increasingly complex. Such developments highlight the epistemic belief in data driven processes as rational and free from bias, the ability of data to calculate and pre-empt risk, and the inherent power asymmetry involved in such processes which increasingly emulate and incorporate commercial business models and platforms. These changes need to be placed within wider historical struggles concerning the governance of movement and migration, addressing the implicit power structures in border regulation and control. As such, the advent of datafication must be (re)politicised, and the evolution of specific forms of border and surveillance technologies questioned. I use the notion of Data (In)justice to identify some of the ways in which these practices further historical marginalisation and illegalisation of asylum seekers, refugees and migrants within Europe. Based on examples from ongoing fieldwork in Athens, this paper will discuss the embodiment of datafied border regimes in Greece, reflecting on interviews with activists; humanitarian workers; border agents; and refugees and asylum seekers. Examining how datafied borders are internalised and enacted - affecting identity and the self, how they are negotiated and implemented, and how they both shape and are shaped by the actors affected – including moments of resistance, this paper will shed light on how datafication is changing practices and leading to evermore impenetrable borders, as well as furthering historical oppression of refugees, asylum seekers and illegalised migrants.

Data, discrimination and inequality

Data and Social Justice Panel paper 4: Towards data justice

L. Dencik

Cardiff University, Cardiff, United Kingdom

Content
This final paper takes account of the issues raised in the previous papers and builds on these to advance a conceptual framework for data justice. Drawing on key theories of social justice, the paper will outline how data developments relate to these ideas, and will consider ways in which they require us to rethink the meaning of social justice in an age of datafication. Whilst discussions on information technologies and justice have often been contained within Rawlsian approaches to social justice that focus on the distribution of goods, datafication brings about a condition of 'abnormal justice' (Fraser 2008) that invites us to ask more fundamental questions about the very 'grammar of justice' that we might use to make justice claims in relation to data. The paper will make suggestions for what this means in terms of advancing data justice as a framework for research and practice. In particular, it will make the case for privileging the experiences of impacted communities, particularly those that have historically been subject to 'oppression and domination' (Young 2011), and connecting these to new and on-going struggles that relate to conditions of democracy,

corporate power, and citizenship as they play out in datafied societies.

Data, discrimination and inequality

Searching for a better present: the need to reimagine artificial intelligence systems to advance social justice

T. Krupiy

Tilburg University, Law, Tilburg, Netherlands

Content
Currently, many data scientists in proposing how to translate the notion of fairness into the architecture of artificial intelligence decision-making systems prioritize those definitions of fairness that fit the state of the art in data science. The predominant focus on making fairness work for data science inhibits achieving a social justice agenda and for accounting for the positionality of the marginalised communities. What is needed is a fundamental rethinking of how artificial intelligence systems capture the world and operate. Computer scientists have been inspired by sci-fi movies and novels when innovating. For instance, Apple developed the Siri voice-recognition software based on the imagery of voice-controlled robots in the Star Wars movie. The paper engages with the question of how the architecture of an artificial intelligence system that generates decisions concerning individuals can be reimagined in order to comport with the social justice objectives. This scholarly work has an element of a sci-fi literary work in that it conjectures how futuristic artificial intelligence systems might look like. This paper uses critical legal theory and law to demonstrate how computer scientists can create alternative approaches to doing data science that account for a broad conception of fairness. It is concluded that legal theory and law provide a valuable analytical framework for guiding responsible technological innovation.

Oral presentation

13:00 - 14:30   SFG 2020

Navigating essential tensions in researching Data Justice

Navigating essential tensions in researching Data Justice

PANEL PROPOSAL: Navigating essential tensions in researching Data Justice

L. Taylor, H. Mukiri-Smith, A. Martin, S. Jameson

TILT, Tilburg University, Tilburg, Netherlands

Content
David Lyon has written that all surveillance operates on a spectrum between care and control (Lyon, 2007). This panel will explore the political, social and philosophical tensions in researching issues of data justice. Data technologies framed as tools for representation of the poor and invisible also expose and surveil, and systems designed for healthcare access, political dialogue or access to financial instruments almost universally do so by categorising and sorting. This may be problematic even without the extra step of exploiting and monetising data from these systems. This presents a tension for the researcher: how can we productively engage in empirical research, dialogue and debate with the developers and advocates of technologies of datafication, and how should we mediate between conflicting interpretations of justice?

The panel will look at this problem in three domains:
1. The developmental state. Data technologies such as biometrics, systems that identify vulnerability and others that allow digital representation may make it possible to overcome deprivations. However, the potential for infringements of rights and freedoms is perhaps higher when they are applied to already-vulnerable and low-income populations. How should we interrogate these systems and frame our findings in relation to justice?
2. The entrepreneurial state: tensions between the (often political) need to plan and the flexibility of emergence of data-driven solutions; mismatches in types of legibility (Scott, 1998); who should be the target of data justice when discussions of ethics and fairness tend to be aimed at business rather than citizens; and finally, how to view datafication's impacts on tools such as regulation, which seem like central instruments of justice in relation to technology.
3. Humanitarian work and emergency response: Actors like UNHCR are increasingly concerned with legal barriers in the form of national identification requirements, which restrict displaced populations' access to mobile connectivity and financial services. In attempting to address these barriers through biometric registration, the provision of identity credentials, and increased third-party access to UNHCR data, the Agency is increasing these populations' visibility to host states, service providers, and others. This case reveals complex legal, social, and technological dynamics of exclusion and inclusion, as well as important tensions inherent in data justice concerning access and privacy.

Oral presentation

13:00 - 14:30   SFG 2030

Data-driven governance and open data

Data-driven governance and open data

Making Data Ethics. Mapping the discourses that shape responsible data practices

M. T. Schäfer, I. Muis

Utrecht University, Utrecht Data School, Utrecht, Netherlands

Content
Recent academic publications put an emphasis on reviewing data practices in terms of social justice (e.g. Hintz, Dencik, Wahl-Jorgensen 2019) or points to dangers, shortcomings and blatant errors in the use of algorithms in finance (Pasquale 2015), public management (e.g. Eubanks 2018), risk profiling (e.g. Angwin et al. 2016), and other areas. While these publications accurately inform about deficits and dangers, they also paint a homogeneous picture of governments and corporations in (not) dealing with these issues. This falls short in recognizing the complexity and the competing agendas within these organizations. It neglects how different discourses are shaping awareness for the deficits of data practices and blends out the actual efforts for developing responsible data practices.
Our research traces the emergence of "data ethics" within Dutch (local) government organizations. Drawn from two years of participatory observation in municipalities and ministries, our findings allow to map the various actors that assign agency to data ethics within in government organizations. With reference to Foucault, this paper analyses the discourses shaping an emerging action for responsible data practices on various levels of participation, from citizens and advocacy groups to city employees and policy makers. Drawing from Latour's notion of 'making things public', this paper unfolds the complex actor-network of "data ethics" within a government organisation and allows an inside view into the making of data ethics. It provides an understanding for the social imaginaries of data power and points to opportunities for intervention.

Data-driven governance and open data

Data Ethical Awareness Test (DEAT): Measuring data ethical awareness in public management organisation

D. van den Berg

Utrecht University, Utrecht Data School, Utrecht, Netherlands

Content
Data ethics has become mainstream. According to market analyst Gartner, digital ethics and privacy are going to be the biggest trends of 2019. Coinciding with this is the increasing call for a reflective approach to data ethics (Floridi, 2018; EDPS Ethics Advisory Group, 2018). While there has been some research on data ethics from a theoretical point of view, there is a large absence of empirical data. Drawing from earlier work using a data ethical impact assessment this paper proposes a measurement tool for data ethical awareness. The Data Ethics Awareness Test (DEAT) developed in this paper combines ideas about data ethics (Floridi & Taddeo, 2016) with existing methodology on measuring moral thinking (Thoma, 2014; Clarkeburn, 2002). Because of the dangers associated with projects in public management (Eubanks, 2018), the DEAT specifically looks at the possibility of measuring the data ethical awareness of public servants. Due to close

collaboration with several (Dutch) government institutions, there has been a unique opportunity to test and develop the DEAT. The data generated by this tool can not only help to develop teaching methods that aid in increasing data ethical awareness, it also provides valuable insight into the disposition of public management organisation towards data ethics. Practically speaking the DEAT serves a double purpose where it generates valuable data for further research on the one hand and provides the governmental institution with insights in the status quo of data ethical awareness in their organisation.

Data-driven governance and open data

Postcolonial data infrastructures: assessments of data quality and 'culture' in the Caribbean Netherlands

F. Grommé

Goldsmiths, University of London, Sociology, London, United Kingdom

Content
In 2010 the islands of Bonaire, Saba and St Eustatius (the Caribbean Netherlands) were reintegrated into the Netherlands continental state, thereby ending five decades of increased postcolonial independence. Reintegration into the Dutch state has renewed a policy need for data about the island populations. Drawing on ethnographic fieldwork in statistical offices in the European and the Caribbean Netherlands, I analyse how Caribbean statisticians implemented data collection infrastructures partially copied from the European Netherlands to this end. I ask how power imbalances in determining standards of data production are maintained and contested in a postcolonial context.
The case of economic data shows that the adoption of these infrastructures increased data availability and helped to ignite public discussions about poverty on the islands. However, income data and other data types were also the outcomes of everyday negotiations about data quality between statisticians on both sides of the Atlantic Ocean. A preliminary finding is that key to data quality assessments were, among others, perceived 'cultural differences' between the Dutch and Caribbean societies producing the data (cf. Clifford 1988).
The case suggests that global (in)equalities in the availability of data on economic welfare partly result from ongoing state building efforts in non-sovereign regions, and historically embedded discourses and practices in postcolonial administrations. At the same time, as I will show for the case of consumer price data in the Caribbean Netherlands, new actors and data producers are shaping the specificities of postcolonial data politics (Isin and Ruppert 2018).

Data-driven governance and open data

Data power, data security and data protection amidst the escalating US-China trade war

B. Zhao

Tilburg Institute for Law, Technology, and Society, Law School, Tilburg, Netherlands

Content
One of the major issues in US' escalating trade war with China is the still rising data security concern against the backdrop of China's rising data power. Besides the IP controversy, US and her allies worry about the seemingly-unlimited access of Chinese state to any data collected, possessed and processed by Huawei, ZTE and Tengxun and other numerous unknown Chinese services providers on their territory. As witnessed in the recent exclusion/restriction of Huawei's participation of 5G infrastructure, data security (cyber security) certainly has largely undermined China's claim of a peaceful rise.

This paper seeks to analyze China's rising data power and its potential global impacts. The second section describes the formation of the data power by virtue of overseas market expansion (via digital and network products), alleged cyber espionage, fast growing AI capacity, and regulatory regime (strong government

intervention and key digital infrastructure control). Then it discusses how the data power may be utilized for economic, political and societal purposes in the global context, especially against the US data domination, being an important aspect of their global competition. Section three tries to tentatively assess the potential impacts of China's data power on global in/security that is very much stereotyped by political ideologies, economic competition, securitization and militarization regarding ubiquitous global data flows and data use. At last it will propose some specific legal, political and economic measures to mitigate such prevailing mistrust and obstruction of global data flows while China can contribute to the global digital infrastructure and digital economy.

Critical, theoretical and feminist approaches to data in/securities

Critical, theoretical and feminist approaches to data in/securities

Risk Society Redux? From Predictive Policing To Scenario Planning

I. Hoofd

Utrecht University, Media and Culture, Utrecht, Netherlands

Content
Due to ever higher levels of investigative and judicial complexity and uncertainty, law enforcement agencies across Europe are currently facing a challenging situation in relation to combating crime. In order to get a grip on these challenges, attempts have been made over the last decade to big data and analytical tools for the purposes of predictive policing so as to pre-empt crime. However, recent research points out that, while predictive analytics work relatively well in commercial and marketing situations, not only do predictive tools for policing purposes more than often miscalculate future situations, they also tend to opaquely embed and even aggravate existing discriminatory practices (Rosenblatt et.al. 2014, Eubanks 2018). Earlier research on the production and harnessing of risk also suggests that the challenges concerning criminality themselves are paradoxically produced and even aggravated by the use of predictive big data technologies (Virilio 1994, Beck 2009). In order to move away from the narrow calculation of prediction, law enforcement agencies have therefore recently turned to qualitative scenario planning as a welcome addition. Scenario planning, by delving into subconscious and unconscious affective elements of stakeholders and allowing them to externalize these by all kinds of creative means, offers the potential of opening up towards multiple possible futures, thereby helping law enforcement agencies to become more future-ready (Ramirez et.al. 2015). While this article lauds this move towards the openness and ambiguity that narrow data-based predictive policing lacks, it also suggests that the outcomes of scenario planning projects should still be handled with great care. This is because the scenarios produced with law enforcement stakeholders appear not only implicated in various clichéd utopian and apocalyptic narratives that also circulate in the mass media, but because they also seem to be unwittingly implicated in the justification of law enforcement agencies and their paradoxical interest in the propagation of crime. The article will base this conclusion on a combination of the theoretical discussion around the just future as a by necessity unpredictable 'to-come' (Derrida 1989) with recent illuminating findings from a number of scenario planning workshops done with Dutch and British policing agencies.

Critical, theoretical and feminist approaches to data in/securities

Counting Insecurities. Data and the Governability of Migration

L. Stielike

University of Osnabrueck, Institute for Migration Research and Intercultural Studies (IMIS), Osnabrueck, Germany

Content
In December 2018, 164 states signed the Global Compact for Safe, Orderly and Regular Migration. The

compact's first objective is to "collect and utilize accurate and disaggregated data as a basis for evidence-based policies". Proposed actions are the support for migration data hubs, the use of big data for migration governance and capacity building for national statistical offices. How did data make it to the top of the international migration agenda? The paper frames this development as a newly established data&migration apparatus (Foucault 1977) which responds to a powerful discourse of urgency related to the crisis of international and especially European migration governance. The so called refugee crisis of 2015 caused three major insecurities among European politicians. First, the chaotic situations with regard to registration and accommodation of migrants undermined the authority of government agencies. Second, the populist debates on migration in the aftermath of 2015 challenged the objectivity of information on migration. Third, the inability to agree on a common distribution system for asylum seekers questioned the unity of the EU. The paper argues that data made it to the top of the agenda because it appears to resolve these insecurities. Improved data on migration holds the promise to monitor and forecast migration movements, thus strengthening state authority, to deliver objective information for an evidence-based policy and to create unity as it seems uncontroversial. In short, the datafication of migration produces an aura of authority, objectivity and unity and thereby corroborates the myth of the governability of migration.

Critical, theoretical and feminist approaches to data in/securities

PINning down Migrants? On the Datafication and Logistification of Contemporary Migration Management

S. Scheel

University of Duisburg-Essen, Sociology, Duisburg, Germany

Content
Based on ethnographic fieldwork at so-called 'arrival centres' in Germany, this paper develops three interrelated arguments in regards to the so-called 'datafication of border and migration management' (Broeders and Dijstelbloem 2015). First, this datafication cannot be attributed to the securitization of migration alone. We rather experience a logistification of border and migration management which hinges on establishing the traceability of migrants through the build-up of digital databases and the allocation of unique identifiers like biometrics or personal identification numbers (PINs). A central feature of this logistification is a logic of efficiency. Secondly, the 'politics of speed' (Virilio) implicated in this logic of efficiency makes the logification of migration management not less violent than processes of securitization. The brutality of these politics of speed surfaces most vividly when asylum seekers with special needs end up, as the result of administrative acts they do not comprehend, in deportation procedures. In conceptual terms the paper proposes, thirdly, to theorise and analyse the datafication of migration management and the related establishment of migrants' traceability in terms of a sociology of translation (Callon). It is argued that biometrics and PINs follow a synecdochic logic and act as stand-ins for the individuals concerned who are translated into 'immutable mobiles' (Latour). In contrast to a phenomenological approach, that is epitomized by the widely-used notion of the 'data-double' (Lyon), such an approach is better equipped to capture and critique both the symbolic violence as well as onto-political effects (Mol) of the datafication of contemporary border and migration management.

Oral presentation

14:45 - 16:15   SFG 1010

Securitization and militarization of data infrastructures

Securitization and militarization of data infrastructures

A Comparison of the Models and Methods of Surveillance in East Germany and Northern Ireland and Their Relevance to Modern-day Securitization of Society

C. Pierce

Technological University of Dublin, Media, Dublin, Ireland

Content
Despite increasing awareness of the rise in societal surveillance as a result of leaks by former NSA whistleblower Edward Snowden and subsequent revelations from Wikileaks, the damage of pervasive surveillance practices on the individual and on communities has yet to be measured. As John Gilliom has argued, 'until we are able to generate sufficient research to make plausible sense of how differently situated people – welfare mothers, prisoners, students, middle-class professionals – speak of and respond to their various surveillance settings, we will be unable to devise a meaningful account of what surveillance is' (2006, 126). Before we can examine the impact and influence of surveillance on these or other segments of society, we must examine the pervasive nature of general surveillance techniques. The objective of this paper is to consider in detail the historical techniques of government surveillance on communities in Northern Ireland (NI) and the former East Germany (GDR). By looking at these two models of surveillance societies, we can begin to compare and contrast the differences in strategies used in a democracy and a dictatorship. Using these two examples of two heavily surveilled communities, taking a detailed look at five techniques in particular, we gain insight into the implantation of surveillance practices used by different political model structures. The aim is to explore the similarities and differences in strategies used in both states, allowing us to assess the trajectory of future surveillance tactics and its relevance in the securitization of society today.

Securitization and militarization of data infrastructures

Global Race for the Fastest Supercomputers and the Geopolitics of Speed

N. Uzun Weidner

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Content
Twice a year, the "Top500" list ranks the world's fastest 500 supercomputers; computers that outperform the storage capacity and processing speed of personal computers by multiple orders of magnitude. Governments invest hundreds of millions of dollars in supercomputer research while the leading universities and research centers building and hosting these machines, compete for positions in the Top500 fiercely.

Supercomputers have recently become a key technology in an emerging, increasingly data-driven world, especially with their role in large-scale data analytics, often referred to as 'big data'. As the main actors in the algorithmic analysis of large-scale datasets and computer simulation, supercomputers constitute crucial

elements of scientific computing by making numerous scientific experiments possible across disciplines.

For nation states, supercomputers are not only high-performance technological devices which can calculate complex equations in seconds. These data infrastructures signify economic and military dominance in terms of their computing speed. And as such, supercomputers are presented as technological developments of national (security) interest, and often guarded through control over markets and export restrictions.

In this paper, I analyze how the geopolitical power differentials are enacted materially, discursively, and cognitively through the global race for the fastest supercomputers. Building on the data collected through a multi-sited approach which involves multiple methods, I demonstrate how the distinction of national versus international is actively done, undone and redone within the field of supercomputing in light of this geopolitical competition.

Securitization and militarization of data infrastructures

Imagining Global In/Securities – Lethal Autonomous Weapons Systems as Factual and Virtual Technology

T. C. Bächle

Humboldt Institute for Internet and Society, Berlin, Germany

Content
The development of so-called lethal autonomous weapons systems (LAWS) has garnered significant prominence during the last years. Various political and legal bodies are involved in discussions on how to regulate these systems, with many calling for a complete ban. Yet, in discussions on LAWS it remains often unclear, (1) which technologies are meant with this term (ranging from simple landmines to combat-drones, from robots to automatic close-in-weapon-systems) and (2) in what sense they can be considered 'autonomous' at all.

LAWS, in this sense, are part of a "sociotechnical imaginary" (Jasanoff/Kim 2009) promoted by governments, civil society actors, military experts and popular culture. On the one hand, they are an emerging field of constructing in/securities through algorithms and automated decision-making within real and highly consequential data-driven practices. On the other hand, their power is partly based on how military data infrastructures are envisioned, used for deterrence or representation of military force and hence "real in their consequences" (Thomas/Thomas 1928).

After conceptualizing this dynamic between 'the reality' and 'the virtuality' of LAWS, the results of an empirical study will be presented. They include findings from (a) a comparative content analysis of official government policies (incl. EU, USA, China, Russia) on the use and development of LAWS; (b) a semiotic analysis of how LAWS are visualized and framed in PR videos produced by corporate and military R&D; and (c) a discourse analysis of the motives that are applied when imagining the power of this still mostly fictional technology. As will be shown, these images both "further and contest global in/securities".

Oral presentation

14:45 - 16:15   SFG 1020

Computational Knowledge Production in Domestic Security Practices

Computational Knowledge Production in Domestic Security Practices

Artificial intelligence-based security as socio-technical imaginary

J. Hälterlein

Centre for Security and Society, Soziologie, Freiburg im Breisgau, Germany

Content

Advances in machine learning, which is now used in many contexts, have made artificial intelligence (AI) more relevant not just to business but also to governments. In recent years, more and more governments have published strategy papers outlining their vision for the development, application and regulation of AI technologies. In November 2018, the German Government published its National Strategy for Artificial Intelligence as well. Among other possible applications of AI, the intention to intensify the contribution of AI-based technologies to civil/domestic/homeland security is stated. AI could lead to an increase in efficiency in the evaluation of mass data and contribute information for decision-making, which cannot be obtained without AI in an adequate time frame. Possible areas of application include the recognition of persons in the context of the analysis of large amounts of data (face recognition) as well as the spatial and temporal prediction of criminal offenses or identification of future offenders (predictive policing).

The paper presents a research project that firstly elaborates the political imaginary of harnessing AI for civil/domestic/homeland security, and secondly analyses its impact on the development and application of AI-based security technologies. The project will examine the not yet explored performative function of techno-scientific visions of the future in the legitimation of securitization and corresponding security measures. For this purpose, the concept of "socio-technical imaginary" (Jasanoff / Kim 2009, 2015) will be applied, which makes it possible to analyse the productive function of an imagined future for contemporary societal transformation processes, while emphasizing the central role of science and technology.

(The paper is to be presented on the panel: Computational Knowledge Production in Domestic Security Practices, A-153)

Computational Knowledge Production in Domestic Security Practices

Computational Knowledge Production in Domestic Security Practices, A-153

P. Müller, N. Pöchhacker

Technical University Munich, Munich Center for Technology in Society, Munich, Germany

Content

In 2016, ProPublica published an article on recidivism risk assessment software used in courtrooms in the US. We develop a conceptual, theoretical approach on such developments of digitization of law and judiciary from both, an STS and a sociology of law perspective. While issues of statistical risk assessment in sentencing have been broadly discussed by academics and journalists, those discussions are particularly focused on technical arguments, data science paradigms, and political claims. Since a more reflexive investigation is grounding assumptions, juridical implications, discourses and practices is lacking, we provide

a conceptualization of discursive, institutional, and practical shifts resulting from the judicial usage of digital sentencing decision support systems (SDSS). The concepts, however, require both, STS and sociology of law, to cover the given intersections of judiciary system logics and agency of digital technology and procedures. The introduction risk-based SDSS within sensitive arenas of our liberal democracies touches not only questions of discrimination and fairness, but marks a general shift within the institutional rationalities of producing social order. Our conceptualization, however, results in three categories of shifts and effects concerning SDSS: the production of issues and visibilities concerning discrimination with law/enforcement; the inter-institutional bridging of formerly more differentiated areas of law/enforcement, economics, and science; the intra-institutional shift of expertise and practices emerging from this new digital agency at punitive justice. This preliminary exploration shall highlight its scientific and societal importance and offer pending questions for further research like how data is acquired, models designed, and how the SDSS's agency comes into play within the field of punitive justice.

Computational Knowledge Production in Domestic Security Practices

Predictive Policing as 'social sorting on steroids'? Data (In)Justice in practices of forecasting crime

S. Egbert[1], M. Mann[2]

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Content
ENVISAGED FOR PANEL 'Computational Knowledge Production in Domestic Security Practices, A-153'

For several years now, predictive technologies mainly consisting of methods of data analysis and algorithmic decision making, commonly referred to as 'predictive policing', are employed by police departments throughout the world. The rapid evolvement of predictive policing was importantly fueled by the hope of being able to "do more with less" (Beck and McCue, 2009), and to make police work more neutral (Ferguson 2017: 4, 123) by using sophisticated approaches of (big) data mining. Unfortunately, until now the discriminatory potential of predictive policing has been discussed mainly in reference to person-based prediction techniques (predictive profiling), often with recourse to the study of ProPublica (Angwin et al., 2016), in which the COMPAS-system was analyzed, a tool for predicting the risk score of offenders for future law violations (see e.g. Harcourt, 2015; Završnik 2018: 15f.). As COMPAS is not only not a spatiotemporal prediction instrument, but also one primarily designed for judges and not for the police, the recent discussion of the discriminatory potential of current practices of predictive policing suffers great vacancies, which is why we aim to discuss this in our paper. And this discussion must grasp predictive policing as sociotechnical tactic and focus a dimension of predictive policing, which is still of high importance when arguing about biases in policing, all digitalization efforts aside: the ways how predicted risk areas are policed. Therefore, we will discuss both the human-made (by data collection and on the street) and the technology-made discrimination effects in predictive policing.

Computational Knowledge Production in Domestic Security Practices

The Data Driven Policing Ponzi Scheme

F. Jansen

Cardiff University, Data Justice Lab, Cardiff, United Kingdom

Content
Part of Panel: Computational Knowledge Production in Domestic Security Practices

Across Europe police forces are looking towards data and technology to increase their efficiency and

effectiveness in fighting crime. While the implementation is still in its infancy, police departments in Western Europe are investing in the creation and enhancement of databases, testing of biometric identification systems, and the implementation of predictive policing technology. These developments have triggered initial societal debates around issues of privacy and data protection (Dencik et al, 2016). Research on London's Gang Matrix (Amnesty International, 2018) and use of facial recognition at public events across the U.K. (Ferris, 2018) have brought forward serious questions about discrimination and stigmatization. These critiques have focussed on the negative impacts of data driven technologies in society, but have largely overlooked the larger political and economic agenda's surrounding the integration of these systems. This paper is situated in critical social theory, with the aim to "expose and explain power structures and relationships with the view to alleviate unnecessary and unwanted suffering" (Fay, 1987). From this perspective it seeks to address questions how data and technology is related to wider structures and relations of power, which enable systems that disproportionately impact marginalized and resource-poor communities. This paper draws on Zuboff (2015) notion of Surveillance Capitalism to understand the political economy of datafication. She argues that the data society creates a new form of accumulation that "aims to predict and modify human behavior as a means to produce revenue and market control" (2015: 75). Where companies do not compete over prices, they accumulate profits on data collection and analysis, and compete over access to and control over data. This paper argues that to understand the economic drivers behind the integration of data driven technologies in European public institutions, a more nuanced understanding of the relationship between market and state has to be taken into account. Based on in-depth interviews with a range of Western European police officers, policy makers, technologist and oversight activist this paper argues that it is crucial to gain a more nuanced understanding of the political capture of European public institutions by the interest of the market behind these technologies.

Computational Knowledge Production in Domestic Security Practices

To Manage and Protect. Platform Policing in Real-Time

D. Wilson

University of Sussex, Sociology, Brighton, United Kingdom

Content
Panel: Computational Knowledge Production in Domestic Security Practices

Policing, particularly in the United States, is being progressively datafied. This paper interrogates the historical trajectory that is crucial to the analysis and critique of new platform-based security architectures. Predictive policing has already attracted considerable attention, partially due to its seemingly novel fusion of predictive analytics and police work. Hyperbolic early claims—often mobilizing science fiction imagery—that the future could, in fact, be predicted, gestured towards utopic/dystopic imaginaries of seamlessly integrated control. This imaginary has a specific genealogy that can be traced to the advent of modern policing, but which gains traction with the advent of police computerization in the 1960s. The quest for 'real-time' monitoring and control of police activity was heralded as the key to efficient and effective policing. This imaginary continued to haunt policing, even as the precepts of police professionalism fell from grace. It proved a powerful strain within COMPSTAT, the immediate technical precursor of predictive policing. Predictive policing is, however, increasingly only one component of cloud-based data systems coursing through police activity. The imaginary of these transformations can be analysed through security projections of policing as a process of real-time data transmission, perpetually self-adjusting and self-augmenting through machine calculation. The historical contextualization of this imaginary suggests useful vectors of inquiry that position platform policing squarely within the mechanisms of surveillance capitalism. It also aims to hybridize 'hard' and 'soft' policing strategies that emerged in the late 20th century

Computational Knowledge Production in Domestic Security Practices

From HunchLab to ShotSpotter Missions: On the prescription and privatisation of police responses

D. Marciniak[1], T. Linder[2]

[1]University of Essex, Essex, United Kingdom, [2]Queens's University, Kingston, Canada

Content
Submission for the panel "Computational Knowledge Production in Domestic Security Practices"

With its recent acquisition of HunchLab, Shotspotter has expanded its highly successful, cloud-based gunshot surveillance system to include predictive and prescriptive policing tools. While this move fits within broader economic shifts towards "platform policing" (Wilson 2019; Linder 2019; Gates 2019) and its "surveillance-as-a-service" business model, this paper examines the insecurities resulting from these changes to algorithmic knowledge production and its legitimacy in policing. Our research shows that HunchLab has undergone a series of transformations from a dashboard for crime analysis, to spatial predictions of crimes, to its current iteration of prescribing and evaluating patrol strategies for predicted areas. Renamed ShotSpotter Missions, it now promises to integrate ShotSpotter's own, real-time data source, feeding into the prediction process and prescribing police response. We argue that although predictive policing by itself remains a key tool in many law enforcement agencies, this development indicates how prediction can be fused with real-time surveillance and prescriptive algorithmic analysis. Drawing on interviews and document analysis, we analyse how ShotSpotter and ShotSpotter Missions mandate and structure police response, while maintaining their legitimacy to the organisation despite false alarms and false positive predictions. We assess the companies' narrative of increased efficiency and community cohesion against the insecurities emerging from outsourcing central police functions. This research adds to the literature on predictive policing and "big data policing" (Brayne 2017; Ferguson 2017) by expanding its scope to include prescriptive analytics and the privatisation of police surveillance systems.

Oral presentation

14:45 - 16:15   SFG 1030

Data, discrimination and inequality

Data, discrimination and inequality

Diversity, inequality and how people feel about uses of their personal data

H. Kennedy[1], R. Steedman[1], R. Jones[2]

[1]University of Sheffield, Sociological Studies, Sheffield, United Kingdom, [2]BBC, Manchester, United Kingdom

Content
In the emerging field of data studies, a number of writers have pointed out that social inequalities lead to different data experiences, and that already-disadvantaged populations are more likely to be discriminated against in data practices than others. For example, Eubanks (2017) highlights how race and class lead to data-driven inequalities, and Noble (2018) focuses on how search engines discriminate on the basis of race and gender. We engage with these important debates in this paper, focusing not on how data mining affects people differentially, but rather how disadvantaged groups feel about the mining of their personal data. Our project, called Signing In, sought to explore attitudes to and perceptions of the data practices that are enabled by a broadcaster's requirement that its audiences sign in to access its digital services. We did this through focus group research, primarily with disadvantaged populations. We found that being old (that is, 65 or older), having a disability or being from a low socio-economic class informed attitudes to and perceptions of data practices. These factors influenced participants' access to and understanding of 'datafied' technologies, which in turn influenced their ability to have opinions and participate in conversation about data, data mining and related issues. Thus our paper contributes to scholarship on data and inequality by highlighting the importance of age and ability, alongside those factors already identified and discussed in the literature.

Data, discrimination and inequality

Paving over inequalities and ambiguities in the data-driven education system

C. Kulz

University of Cambridge, Faculty of Education, Cambridge, United Kingdom

Content
As successive reforms within the English education system have demanded that schools regard themselves as individual businesses in competition with one another, the production of 'good' data has become paramount to the survival of schools and success of individual teachers within this structure. Tayloristic data outputs are increasingly demanded, where managers decide and workers deliver (Gunter, 2016). Despite data being seen as key to effective leadership and more theoretical or philosophical considerations of headship frequently being regarded as a distracting waste of time (Courtney, McGinity and Gunter, 2017), many head teachers continue to cling to a notion of education grounded in ephemeral, unquantifiable 'magic' moments. This paper draws on research with head teachers and educational leaders to explore the uncomfortable fit between valuing the unquantifiable and carrying out data-driven leadership. It will also explore how a focus on data production within the school paves over persistent inequalities.

Data, discrimination and inequality

Telematics Insurance and fairness of Big Data Analytics

F. Van den Boom

Bournemouth University, Media and Technology, Bournemouth, United Kingdom

Content

With more data being generated and communicated through the use of connected cars, a more accurate assessment can be made of the risk posed by aspects such as speeding, cornering, location and time of travel. This information can be used by insurers to develop more detailed risk profiles based on which to set their premiums. The data collected through the use of the vehicle in combination with relevant data (about the driver such as age, their driving history, the vehicle etc) collected through traditional means from the consumer and third-party data providers such as credit agencies and fraud databases can also be analysed more accurately with the improvement of data analytics tools such as predictive machine learning algorithms.

Telematics is an example of the use of Big data and analytics in insurance providing use-based insurance. If With certain types of use based insurance; the real-time monitoring of their driving allows insurers to adjust their premiums in real time.

This could potentially lead to a situation where everyone pays only for the amount of risk they pose, whereas currently people are placed in a risk pool and those who are fortunate not to be involved in an accident pay for those who are. With the improvements of big data analytics tools as well as quality data from different sources becoming available to insurers, they can make more accurate predictions about the risk a person poses and offer personalised premiums instead of placing people in a risk pool. Despite the benefits of there are also serious concerns about telematics and the use and impact of Big data within insurance with more data from different sources including vehicle sensors being collected and used for insurance purposes as this also increases privacy risks, potential for (price) discrimination and loss of social solidarity. This paper looks at these risks in the context of personal (vehicle) data processing, and how the GDPR regulates both access to vehicle data as well as providing protection against the use of personal data for specific purposes with unwanted (side) effects. More specifically to what extent can the data subjects rights be used to gain access to the personal data collected and the processing used that may lead to a decision which will impact the data subject rights and freedoms and when do the rights and freedoms of others allow these rights to be restricted or refused.

Data, discrimination and inequality

Politics of datafication: the case of Blockchain

S. Semenzin

University of Milan, Milan, Italy

Content

The paper is based on a doctoral research, currently in its second year, that aims to investigate the extent to which the arrival of a new technology, named Blockchain, could represent a means to repurpose power relations in the 'datafied' society. The process of datafication of society (Van Dijck, 2014) has arisen several concerns around mass surveillance and algorithmic discrimination, calling for broader reflections on how to achieve 'data justice' (Dencik, 2017).
Blockchain has been advocated by many as a technical solution to problems related to data ownership and privacy, and it is therefore starting to be applied to several dimensions of sociality, e.g. governance, art, public transport, etc. The decentralized essence of Blockchain and its use of encryption represent among some 'crypto-enthusiasts' a technological revolution and the final solution to the centralization of power

(Tapscott and Tapscott, 2016). However, some scholars have also pointed to the anarcho-libertarian essence of Blockchain (Golumbia, 2016; Gerard, 2017), which in its most extreme form believes that governments should exist only to ensure dominant private power over economy and citizens. In this sense, Blockchain might represent the latest innovation advocated to restructure power relation that might end up re-centralizing dynamics of power in digitally-mediated contexts.

This research aims to look at the societal applications of Blockchain and to the motivations that underlie its development, trying to understand if and to what extent Blockchain could reshape digital power relations, who are the actors that might ultimately benefit from the arrival of this new technology and which are the political and economic interpretations that drive its implementation.

My PhD project aims to study Blockchain technology as applied to different social contexts. I'm looking at the actors involved, and the effects of using a decentralized and encrypted technology for social purposes. By using a mixed-method approach, that includes digital methods and qualitative research, I am studying some of the most relevant Blockchain applications beyond finance, looking at the extent to which its actual use is repurposing the social relations among the actors involved, and the social and cultural imaginaries that underpin them.

Oral presentation

14:45 - 16:15   SFG 2030

Data-driven governance and open data

Data-driven governance and open data

Rubbing against data infrastructure(s): Methodological explorations on working with(in) the impossibility of exteriority

N. Piattoeva

Tampere University, Faculty of Education and Culture, Tampere, Finland

Content
The paper focuses on data infrastructures as heterogeneous assemblages. Sellar (2014) has proposed that data infrastructures are not merely the objects of a detached study, but reconfigure the very conditions under which the study takes place. In like manner we assert that there is no position of exteriority from which to undertake a critique of data or data infrastructures. For example, researcher and researched are embedded in the materialities and policies of audit and performance measurement that rely on the collection of data and hark back to scientific discourses and practices. This paper endeavours to capitalize on the impossibility of exteriority, the exponential extension of data infrastructures and the illusionary binary of actor and context. We intend to describe these complexities and find productive ways to work with and within them, as opposed to approaching them, for instance, as critical research limitations or breaches of scientific objectivity. The paper works with the existing literature on data infrastructures and research methods in education policy analysis, and also with our own research data and first-hand experiences.

Data-driven governance and open data

Reshaping 'education' through data: how professional roles, curricula and pupils' futures are reconfigured through data practices

L. Grant

University of Bristol, School of Education, Bristol, United Kingdom

Content
Data practices are acknowledged as an important mode of governing education (Ozga 2016) with education becoming seen as increasingly 'datafied and digitised' (Williamson 2017; Jarke & Breiter 2016). Within schools, there has been a concurrent intensification in practices of generating, analysing, visualising and intervening with educational data (Selwyn 2016). There has, however, so far been less attention paid to exploring how data practices work 'on the ground'. Drawing from an ethnographic study in an English secondary school, this paper shows how educational data practices worked to produce and constrain the thinking and doing of 'education'. Using aspects of an agential realist theoretical approach (Barad 2007), the analysis considers how people, practices, policies, digital and material tools became part of a wide-ranging data apparatus that reconfigured the possibilities for education.

This paper will consider how educational data practices were involved in governing and reconfiguring education in a school and the consequences of this for teachers and pupils. The curriculum was reconfigured

through algorithmic triage devices that created unequal access to a broad curriculum for different groups of students. Teachers' roles were orientated away from a personal and relational understanding of their pupils towards engagement with data as a more legitimate form of knowledge and professionalism. Data practices also produced contradictory orientations towards pupils' futures, in which teachers struggled to reconcile normative, predictive and probabilistic data futures. While in some ways, data practices in the school appeared to govern nearly aspect of education, analysis also showed moments of ambivalence and uncertainty, which suggested some potential openings for constituting education differently.

Data-driven governance and open data

City dashboards = citizien engagement?

H. Vornhagen[1], B. Davis[2], K. Young[3], M. Zarrouk[1]

[1]Insight Centre for Data Analytics, Galway, Ireland, [2]Maynooth University, Maynooth, Ireland, [3]National University of Ireland Galway, Information Technology, Galway, Ireland

Content
This research investigates the role of data visualisation such as city dashboards within smart city governance. City dashboards are considered an ideal medium to collect and share data about a city in one space. However, how effective are city dashboards in informing citizens? Visualisation, while a useful tool to present data, is too often seen as automatically furthering deeper understanding of such data[1]. However, little research has been carried out into how visualisations are built (which data sources, whose agenda)[2] or how these impact users.
Our research therefore firstly provides a contextualised look at current city dashboards. This is achieved by reviewing both literature and current dashboard designs to situate city dashboards within the wider frame of city visualisations as well as other data dashboards. Secondly we describe our approach to including city communities when developing such visualisations based on our work with the Galway Environmental Network which focused on collaborative approaches such as co-creation and joint ownership. Lastly our research considers how existing city dashboards help to portray cities as complex systems. Using systems thinking approaches [3], we describe how they help or hinder a holistic view of the city. Factors such as time, hidden relationships and internal dynamics which often influence system behaviour[3] are rarely made visible in city dashboards thereby contributing to people's tendency to oversimplify complexity, and to expect quick-fix solutions [4].
So far we have found that current dashboards are not effective in informing citizens as, in their current design, they do not bring added value to users. Our research also showed that dashboards tend to replicate local authority's departementalisation which hinders users to engage with cities as complex systems.

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Data-driven governance and open data

Anticipatory Ledgers: future of data governance on the blockchain "smart contracts"

D. Kera

University of Salamanca, BISITE - Bioinformatics Intelligent Systems and Educational Technology Research Group, Salamanca, Spain

Content
The blockchain and distributed ledger technologies (DLTs), but also sophisticated machine-to-machine interactions and exchanges of data over IoTs and satellites bring automation to a new level with the so-called "smart contracts" and various experiments with data governance. Paradoxically, the technologies whose sole purpose is to create distributed and decentralized data sharing and novel forms of trust over smart (automated) contracts still lack proper governance processes and structure. They resist any attempts to involve various stakeholders in the definition of standards and rules reduced to consensus algorithms. Instead of policy coordination (with a rare exception of the ITU-T Focus Group on Application of Distributed Ledger Technology), the preferred form or communication with the public and other stakeholders remains the "demo" and "white papers." These "promissory futures" and "sociotechnical imaginaries" behind DLTs feed the current vogue of predictive and anticipatory design that promises full (and fully undemocratic) control over the user decisions. In 2018 – 2019, with a team of artists, developers, and designers, we created the Lithopia project to test the possibilities of anticipatory governance over prototyping. We explicitly look for convergence between prototyping and policy deliberation through stakeholder engagements in "future-making." Instead of predicting user needs that ultimately serve one version of the (industry defined) future, anticipatory prototyping involves the users as stakeholders in the adoption of the emerging technology. It offers templates of blockchain services that present the future scenarios and dilemmas, which can be modified and iterated to support inclusive and democratic "future-making" that combines prototyping with deliberation. This experimental, design and policy-driven research explores the tensions between the automatization as data governances and the social, political, but also ethical and philosophical demands of accountability and justice in decision making systems and governance.

Lithopia
https://github.com/anonette/lithopia

Oral presentation

16:30 - 17:30   HS1010

Decolonising Data. Undoing the South

Decolonising Data. Undoing the South

Decolonising Data. Undoing the South.

M. Halkort[1], M. Lim[2], T. Lauriault[2], S. Milan[3]

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Content
The Global South, once only a footnote in critical data studies, has become a "hot" topic of late. Papers emphasizing 'a view from the South' are proliferating at conference, workshops and events, broadening our understanding of the intersectional dynamics of data capitalism across the globe. Yet this renewed interest is not without risks, as it can easily subsume a wide range of locally specific dynamics and under one discrete geographical and onto-epistemic location, assigning the South once more a status of exceptionalism that merely reifies, extends and reconfigures structures of modern colonial thought.
Against this backdrop, this proposed panel attempts to critically interrogate the multiple intersections, turbulences, interdependencies, and circulations shaping the political economy of data, both within and between "North" and South" that distribute logics of dispossession, exploitation, subalternity and domination – all master signifiers of colonial power relations – across markets, platforms, data practices and infrastructural domains. Putting empirical and theoretical contributions from a series of case studies into conversation with one another, this panel endeavours to reveal manifestations of data power that have so far remained hidden or insufficiently discussed. Moderated by Stefania Milan, the conversation in this panel includes, but not limited to, new faces of subalternity in big data sets of dead and missing migrants in the Mediterranean (Monika Halkort), post-colonial mapping Canada's North, Ireland and the decolonisation of First Nations Data in Canada (Tracey Lauriault), decolonised practices of counter-mapping and data activism in Southeast Asia (Merlyna Lim). What brings this diverse range of experiences together is their commitment to re-think power asymmetries in planetary data infrastructures and computation from the view point of the border. The border here does not refer to a geopolitical location, but rather to an onto-epistemic disposition: a commitment to thinking between disciplines by building on concepts, ideas, practices and modes of questioning that have been denied proper recognition in academic thought.