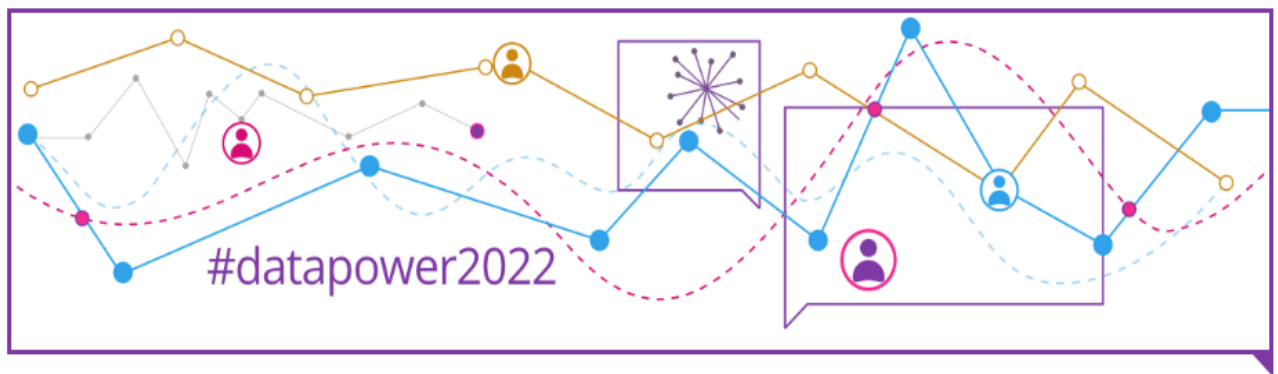


DIALOGUES IN DATA POWER 2022



Sheffield UK, Bremen Germany, Ottawa Canada

22nd - 24th June 2022

DialoguesInDataPower2022@gmail.com

Twitter: @DataPowerConf #DataPowerConf



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Welcome from the Hosts

Dear participants,

We welcome you to the 4th Data Power Conference in [Sheffield](#), [Bremen](#), [Ottawa](#) and online. This conference is organised in a hybrid format in by the hosts of the three previous conferences 2015 (Sheffield), 2017 (Ottawa) and 2019 (Bremen). Since 2015 the Data Power Conferences have hosted critical reflections on data power and the social, political, economic, and cultural consequences of the increasing presence of data in our lives, workplaces, and societies. The ***Dialogues in Data Power Conference 2022*** returns to some of the fundamental questions that underpinned the founding of the conference. It is conceived as a series of dialogues *about* overarching concerns and *with* disciplines and stakeholders working with and on data. Contributions in this year's conference will reflect on the following:

- How can stakeholders be engaged in critical conversations about data power?
- What constitutes rigorous methods when it comes to researching data power?
- To what extent does critical data power research need to focus on specific instances of data power in action?
- What contributions can generalised critiques make to our field?

To facilitate dialogues across disciplines and with stakeholders, this year's conference features papers, panels, workshops, roundtables, and keynote from interdisciplinary teams including disciplines incorporating aspects of data science, and papers which incorporate non-academic collaborators from a range of sectors. As always, the **Data Power Conference** remains concerned with in/equalities, discrimination, questions of justice, rights and freedoms, agency and resistance.

We look forward to three exciting and thought-provoking days and are delighted to welcome an excellent range of delegates from Asia, the Pacific, the Americas, Europe and the UK. As in other years, we will record the presentations and make them available afterwards.

We wish you all a fantastic conference and look forward to stimulating dialogues!

Jo Bates, Monika Frątczak, Ysabel Gerrard, Helen Kennedy ([University of Sheffield](#))
Juliane Jarke ([University of Bremen](#))
Tracey P. Lauriault ([Carleton University](#))
Monika Halkort (University of Applied Arts Vienna)

General Information

Sheffield UK (BST)

- **Location:** Arts Tower (rooms LT03, LT05, and LT06), University of Sheffield Western Bank, Sheffield S10 2TN. The venue is around a 30-minute walk away from the city center and train station.
- **Local Contact:** Jo Bates (jo.bates@sheffield.ac.uk)
- **Refreshments** - there is a cafe in the venue that serves a selection of drinks and snacks
- **Lunch** will be delivered to participants and is included in the fee
- **Dinner** on the 22nd of June is booked from 7pm at the University Arms with food and drink available for purchase.

Bremen DE (CET)

- **Location:** University of Bremen, DOCK ONE, Konrad-Zuse-Straße 6, 28359 Bremen. Please enter through the main entrance at the front on the left. DOCK ONE is on the 2nd floor. There will be sign posts.
- **Local Contact:** Juliane Jarke (jarke@uni-bremen.de)
- **Refreshments** (coffee, tea and water) will be served during the breaks.
- Lunch and dinner will be paid individually by participants.
- **Dinner** on 23rd June, 8.30 pm (10-minute walk from conference venue) Haus am Walde, Kuhgrabenweg 2, 28359 Bremen.

Carleton CA (EDT)

- **Location:** Carleton University, Richcraft Hall, School of Journalism and Communications at the [Readers Digest Resource Centre](#) for the in-person portion and Room 4308 to broadcast simultaneous online panels, both on the 4th floor.
- **Local Contact:** Tracey P. Lauriault (Tracey.Lauriault@Carleton.ca)
- **Lunch & Refreshments:** Coffee, tea and drinks will be served throughout the day, and lunch will be provided.
- **Dinner:** A group dinner will be organized but we go Dutch!

ONLINE

All the Keynotes, the Book Launch and Sessions will be broadcast from a variety of platforms in their respective time zones for each day. You will be emailed a **FINAL Programme at a glance** a few days prior to the conference with the s. Audio-Visual recordings will be rebroadcast and archived for future access.

Program at a Glance

to [Programme at a Glance](#)

Keynote Biographies and Abstracts

Day 1 In-Person Sheffield, Wednesday June 22 (Live Stream)

Time:	Ottawa 10:30-12:00	Sheffield 15:30-17:00	Bremen 16:30-18:00
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Leave to Remain: The Biopower of Migration Algorithms and Data Structures

Irene Fubara-Manuel, Lecturer in Digital Media Practice (Media and Film), School of Media, Arts and Humanities, University of Sussex, UK



Abstract: Contemporary visa regimes rely on data from migrants, which are then structured and processed through a set of algorithms that determine levels of access and mobility. In their reproductive function to create and govern data subjects, such systems have power over life. They exclude and permit bodies through the border—leave (permission) to enter or leave to remain and so on. This keynote uses the UK's visa regime as a starting point to explore the algorithmic cultures of bordering through which the UK government polices its national boundaries. It delves into the archive of the UK visa regime to trace the

production of racialised data subjects. Connecting this archive to contemporary data and algorithmic practices, it asks what reclamation of life and subjecthood are possible when problematizing these archives? What legacies and data ghosts exist in the current visa regime? Borrowing the method of critical fabulation from Saidiya Hartman, this keynote interrogates how migrant algorithmic imaginaries might stress the limits of the archive and unsettle the current biopolitical regimes of migration. It centres migrant algorithmic imaginaries in the production of alternate visions and futures of the border.

Biography

Irene Fubara-Manuel is a Brighton-based creative practitioner and academic working in animation, game design, and installation art. They are also a Lecturer in Digital Media Practice at the University of Sussex. Their research interrogates techno-cultures of the border, envisioning alternatives to current migration systems through their creative practice. Irene is currently a *JUST AI* Visiting Fellow at the *Ada Lovelace Institute*.

Irene's project for the *JUST AI* Fellowship proposes ethnographic and participatory action research to explore possibilities for decolonial and anti-racist alternatives to migration algorithms. The project aims to move the focus of streaming tools, used in applying for UK visas, away from automating a 'hostile environment' and towards reimagining a fair and welcoming UK for all migrants, irrespective of background.

Day 2 In-Person Bremen: Thursday June 23 ()

Time:	Ottawa 12:00-13:30	Sheffield 17:00-18:30	Bremen 18:00-19:30
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Generative friction: exploring conceptual points of contact between computing sciences, social sciences, and philosophy

Panel Chair: Juliane Jarke, University of Bremen

Linnet Taylor, Professor of International Data Governance, Tilburg Institute for Law, Technology, and Society

George Fletcher, Full professor of computer and data science and chair of the Database Research Group, Eindhoven University of Technology

Alexander Serebrenik, Full Professor of Social Software Engineering, Software Engineering and Technology cluster of Eindhoven University of Technology

Akrati Saxena, Research Fellow at the Department of Mathematics and Computer Science, Eindhoven University of Technology

Abstract: This keynote session will be a discussion amongst the founders of Social X, a Netherlands-based interdisciplinary group formed to explore the intersection of fundamental questions in computing sciences, social sciences, and philosophy. In this keynote discussion we will explore the differences between boundary objects (Star and Griesemer 1989, Star 2010, Huvila et al. 2017), a concept created to denote the way scientists manage the tension between diverse methods and viewpoints, and the need for cooperation and common understandings. We use the notion of boundary objects to explore concepts which are interpreted in different ways by computational scientists and social scientists or humanities scholars, but where parallel interpretations can coexist and allow disciplines to collaborate. Examples include ‘data,’ ‘power,’ ‘information,’ ‘fairness,’ ‘progress,’ and ‘trust.’

In this session we will ask how we can tell if a concept has features of a boundary object or not. For instance, fundamental disagreements about the concept of fairness in relation to computing theory and applications have arisen over the last decade, and today these arguably function in generative ways that are differently productive from treating fairness as a boundary object and seeking peaceful disciplinary coexistence. In contrast, the notion of ‘governance’ is understood quite differently across disciplines, but these concepts can coexist and be used in parallel by these different disciplines.

What are the concepts at this intersection of disciplines that can behave as boundary objects, making collaboration possible, and what are the ones that lead to power struggles, critique and disjunctures between fields? Can a concept demonstrate both destructive and generative functions at once, depending on the context? We will suggest consideration of concepts such as knowledge, governance, authenticity, and kindness, engaging with the audience to debate and better understand this tension.

Biographies



Linnet Taylor is Professor of International Data Governance at the Tilburg Institute for Law, Technology, and Society (TILT), in the Netherlands. Her research focuses on digital data, representation, and democracy, with particular attention to transnational governance issues. Her work on group privacy and data justice is used in discussions of technology governance in countries around the world. She leads the ERC Global Data Justice project, which aims to develop a social-justice-informed framework for governance of data technologies on the global level. The research is based on insights from technology users, providers and civil society organisations around the world. Her work is also currently supported by the Luminate foundation and the EU AI Fund. She is a member of the Dutch Young Academy (De Jonge Akademie) and a co-chair of the NWO's Social Science roundtable advisory group.



George Fletcher (PhD, Indiana University Bloomington, 2007) is full professor of computer and data science and chair of the Database Research Group at Eindhoven University of Technology. He studies data systems, increasingly with a focus on people, e.g., data systems education and knowledge science. He is an author of the monograph "Querying Graphs" (Morgan and Claypool, 2018), scientific member of the graph query and schema language international standardization working groups of the LDBC, executive board member of the EDBT Association, and co-organizer of DataEd at SIGMOD 2022.



Alexander Serebrenik (PhD, KU Leuven, 2003) is a Full Professor of Social Software Engineering at Eindhoven University of Technology, The Netherlands. His research goal is to facilitate evolution of software by taking into account social aspects of software development. He has co-authored a book *Evolving Software Systems* (Springer Verlag, 2014) and circa 200 scientific papers and articles. He has won several distinguished paper and distinguished review awards, as well as acted as steering committee chair, general chair, program (co-)chair and track (co-) chair of such software engineering conferences as ICSE, ICSME, ICPC and SANER. He is member of several national and international diversity and inclusion-related activities.



Akrati Saxena is a Research Fellow at the Department of Mathematics and Computer Science, Eindhoven University of Technology (TU/e), The Netherlands. Her research interests cover Social Network Analysis, Complex Networks, Computational Social Science, Data Science, and Fairness. Her current research is focussed on designing fairness-aware solutions for social problems using Network Science and Data Science techniques. She has written several book chapters on social network analysis and social media data analytics. She is co-editing the *Deep Learning for Social Media Data Analytics* book that will be published at *Studies in Big Data*, Springer book series. She has co-organized tutorials and special track at ICDM 2021, ASONAM 2021, and CSoNet 2019 conferences.

Day 3 In-Person Carleton: Friday June 24 ()

Time:	Ottawa 9:00-10:30	Sheffield 14:00-15:30	Bremen 15:00-16:30
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Data Sovereignty

Jonathan Dewar, Chief Executive Officer, First Nations Information Governance Centre, Ottawa, Canada



Abstract: Jonathan Dewar will discuss the concept of First Nations data sovereignty in Canada and the work of the [First Nations Information Governance Centre](#) and its partners to advance a national data governance strategy.

Biography

Jonathan Dewar, PhD, has spent most of his 20+ year career directing research and knowledge translation initiatives on behalf of Indigenous-governed national NGOs and has been recognized as a leader in healing and reconciliation and Indigenous health and well-being education, policy, and research. He has published extensively on these subjects, with a specialization in the role of the arts in healing and reconciliation and has lectured nationally and internationally. From 2012-2016, Jonathan served as the first Director of the Shingwauk Residential Schools Centre and Special Advisor to the President at Algoma University, where he led research, education, curatorial, and community service programming, and taught courses in Political Science and Fine Arts. From 2007-2012, Jonathan served as Director of Research at the Aboriginal Healing Foundation, where he led the Foundation's research and evaluation efforts. He has also previously served as a Director at the National Aboriginal Health Organization, as a senior advisor within the federal government, and within the Office of the Languages Commissioner of Nunavut. Jonathan received a doctorate from the School of Indigenous and Canadian Studies at Carleton University, where his research focused on the role of the arts in health, healing, and reconciliation. He also holds an appointment as Adjunct Research Professor in the Department of Sociology and Anthropology. Jonathan is of mixed heritage, descended from Huron-Wendat, French and Scottish-Canadian grandparents.

In honour of Dr Dewar's Keynote address, the Dialogues in Data Power 2022 Conference Committee will donate to the [FNIGC National Student Bursary](#).

Book Launch: New Perspectives in Critical Data Studies

Day 3 In-Person Bremen: Friday June 24th ()

Time:	Ottawa 7:45-8:45	Sheffield 12:45-13:45	Bremen 13:45-14:45
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Welcome and short introduction to the [book](#) by the editors

Moderator: Juliane Jarke, University of Bremen

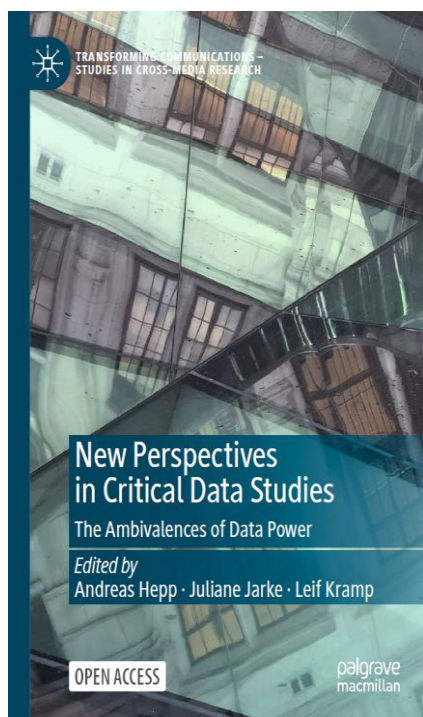
Andreas Hepp, Juliane Jarke and Leif Kramp (University of Bremen)

For each of the three sections of the book, one of the contributors will give a five-minute introduction to their chapter:

- Section I: Global Infrastructures and Local Invisibilities**
 Jack Linchuan Qiu (Department of Communications and New Media, National University of Singapore): [Data Power and Counter-power with Chinese Characteristics](#)
- Section II: State and Data Justice**
 Lyndsay Grant (School of Education, University of Bristol, UK): [Reconfiguring Education Through Data: How Data Practices Reconfigure Teacher Professionalism and Curriculum](#)
- Section III: Everyday Practices and Collective Action**
 Katrin Amelang (University of Bremen, Germany): [\(Not\) Safe to Use: Insecurities in Everyday Data Practices with Period-Tracking Apps](#)

Respondent

Tracey P. Lauriault (University of Carleton, Canada)



About the Book: [This Open Access book](#) is based on contributions from the 3rd Data Power Conference in 2019. It examines the ambivalences of data power. Firstly, the ambivalences between global infrastructures and local invisibilities that challenge the grand narrative of the ephemeral nature of a global data infrastructure. They make visible local working and living conditions, and the resources and arrangements required to operate and run them. Secondly, the book examines ambivalences between the state and data justice. It considers data justice in relation to state surveillance and data capitalism and reflects on the ambivalences between an “entrepreneurial state” and a “welfare state.” Thirdly, the authors discuss ambivalences of everyday practices and collective action, in which civil society groups, communities, and movements try to position the interests of people against the “big players” in the tech industry. The book includes eighteen chapters that provide new and varied perspectives on the role of data and data infrastructures in our increasingly datafied societies.

Editors

Andreas Hepp is Professor of Media and Communications and Head of ZeMKI, Centre for Media, Communication and Information Research, University of Bremen, Germany. He is the author of 12 monographs including *The Mediated Construction of Reality* (with Nick Couldry, 2017), *Transcultural Communication* (2015) and *Cultures of Mediatization* (2013).

Juliane Jarke is a senior researcher at the Institute for Information Management Bremen (ifib) and Centre for Media, Communication and Information Research (ZeMKI) at the University of Bremen, Germany. She co-edited *The Datafication of Education* (with Andreas Breiter, 2019) and *Probes as Participatory Design Practice* (with Susanne Maaß, 2018). In 2020 she published the open access monograph *Co-creating Digital Public Services for an Ageing Society*.

Leif Kramp is a post-doctoral media, communication and history scholar and Research Coordinator of the Centre for Media, Communication and Information Research at the University of Bremen (ZeMKI), Germany. He has authored and edited various books about the transformation of media and journalism and is a founding member of the German Association of Media and Journalism Criticism (VfMJ).

Closing Remarks

Day 3 Carleton: Friday June 24th ()

Dialogues in Data Power Organizing Committee

Program

Day 1 - Sheffield

Wednesday June 22

Welcome and Opening Remarks

ArtsLT1 Tower (Jo Bates)

Time:	Ottawa 4:00-4:25	Sheffield 9:00-9:25	Bremen 10:30-11:55
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Session I

Time:	Ottawa 4:30-5:55	Sheffield 9:30-10:55	Bremen 10:30-11:55
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In-Person Panel SP1 Emotions of data and user perspectives (Sheffield)

Arts Tower LT1 (Chair: Itzelle Medina-Perea)

- **Algorithmic Autobiographies and Fictions: A Method**, Sophie Bishop, Tanya Kant
- **How do Period App Users Navigate Data Power in their Daily Lives?** Stefanie Felsberger
- **Intertwined Relations: The Merging of Data, Embodied Sensation, and Emotion**, Xiufeng Jia
- **Emotional responses to data visualisations about climate change in two different national contexts**, Monika Frątczak

Online Panel BZ1 Regulation and governance (Bremen)

(chair: Karin van Es)

- **Big Data in criminal investigations: “European Imaginary” and orientations for the future**, Laura Neiva
- **“Whose time and space?” Exploring discourses on experimental legal regimes in Russia**, Dmitry Muravoyv
- **A Hippocratic Oath for Data Ethics: What is it, what does it replace, how would it work?** Jethani Suneel

Online Panel SZ2 Data Justice and Colonialism (Sheffield)

(Chair: Ysabel Gerrard)

- **The de/construction of First Peoples’ and LGBTQIA++ identities in Google’s machine learning** Bronwyn Miller
- **Race, Death and Epistemic Justice in Machine Sensing and Environmental Research**, Monika Halkort
- **The Data Center Cannot Hold: Data Colonialism and the Nimbus Project**, Dan Kotliar, Alex Gekker

Session II

Time:	Ottawa 6:10-7:35	Sheffield 11:10-12:35	Bremen 12:10-13:35
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In-Person Panel SP2 Data practices – mitigating harm (Sheffield)

Arts Tower LT1 (chair: Chisenga Muyoya)

- **Lessons in mitigating algorithmic bias from the field**, Ruth Beresford
- **Data and AI for Good initiatives as cases studies of promoting computational technology**, Ville Aula
- **Data-driven Real-time Profiling: Manipulation or Legitimate Influence?** Jiahong Chen, Lucas Miotto Lopes
- **Democratising Data-driven Governance: Citizen Assemblies and Data Power**, Arne Hintz

In-Person Panel SP3 Living with Data panel (Sheffield)

Arts Tower LT2 (chair: Helen Kennedy)

- **Findings from the Living With Data project**, Hannah Ditchfield, Susan Oman, Helen Kennedy, Jo Bates, Itzelle Medina-Perea, Aidan Peppin

Online Panel SZ3 Data Science: modelling, algorithms, AI and automation (Sheffield)

(Chair: Ysabel Gerrard)

- **Models of ecological crisis: Climate uncertainty and the gist of “What if,”** Rolien Hoyng
- **The French data labour subcontracting value chain: AI firm governance and data power inequalities** Clement Le Ludec
- **Human-centered ADM research? Foregrounding a peoples’ perspective**, Stine Lomborg, Anne Kaun

Session III

Time:	Ottawa 8:50-10:15	Sheffield 13:50-15:15	Bremen 14:50-16:15
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In-Person Panel SP4 Data and information circulation (Sheffield)

Arts Tower LT1 (chair: Chisenga Muyoya)

- **Search engines, online archives and the ‘right to be forgotten’: an ever-tightening embrace**, Irini Katsirea
- **When Friction Becomes the Norm: Antagonism, Discourse and Planetary Data Turbulence**, Sebastian Lehuedé
- **The Power of Algorithms in Crises: Digital Ethnography on the Agency of Algorithms in the Case of the Christchurch Attacks**, Minttu Tikka, Henna Paakki, Kaisla Kajava

In-Person Panel SP5 Data practices – health and disability (Sheffield)

Arts Tower LT2 (chair: Hannah Ditchfield)

- **Patterns in Practice – beliefs, values and feelings in practitioners’ engagements with data mining for drug discovery**, Jo Bates, Itzelle Medina Perea, Helen Kennedy, Erinma Ochu
- **Imagining alternative data practices for understanding the experience of disability and improving accessible societies**, Denis Newman-Griffis
- **A critical analysis of the role of expectations about data in shaping health data flows in the UK healthcare sector**, Itzelle Medina Perea, Jo Bates, Andrew Cox

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In-Person Panel BP1 Methodological reflections and approaches (**Bremen**)

DOCK ONE (chair: Theo Röhle)

- **Ethnographic Interventions. Reflecting on ethnographers' roles in data science projects**, Miriam Fahimi, Nikolaus Poechhacker, Katharina Kinder-Kurlanda
 - **Introducing Sphere Transgression Watch: a digital tool that tracks the growing influence of Big Tech in our society**, Marthe Stevens, Bernard van Gastel, Andrew Hoffman, Lotje Siffels, Tamar Sharon
 - **Interviewing an Algorithm: Developing a research method for critical inquiry into algorithmic systems from a socio-cultural perspective**, Iris Muis, Mirko Tobias Schäfer, Arthur Vankan, Daan van der Weijden
-

Online Panel OZ4 Data Science: modelling, algorithms, AI and automation (**Ottawa**)

(chair: Jess Reia)

- **Student Stakeholders and Critical Data Pedagogy: The Imperative of Ethics in Data Science Programs**, Justin Grandinetti
 - **Artificial Intelligence, Data Exchanges, and "The Biggest Lie on the Internet,"** Jonathan Obar
 - **Epistemological problems of data power in risk management processes**, Sucheta Lahiri, Jasmina Tacheva, Jeff Saltz
-

Online Panel SZ5 Metaphors and historical perspectives to make sense of the data & platform economy: a critical approach (**Sheffield**)

(Chair: Benedetta Brevini)

- **From tech giants to digital lords: the promise (or tragedy) of the digital feudalism framework**, Benedetta Brevini
 - **Back to the medieval village – digital pillories and witch hunts as tools for social control**, Jakob Linnaa Jensen
 - **Technocolonialism: extraction, experimentality and discrimination in 'states of emergency'**, Mirca Madianou, Goldsmiths, University of London
 - **The decolonial turn in data studies**, Nick Couldry, London School of Economics and Political Science, UK
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Keynote

Arts Tower LT1 (chair: Jo Bates)

Time:	Ottawa 10:30-12:00	Sheffield 15:30-17:00	Bremen 16:30-18:00
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SHEFFIELD KEYNOTE: Leave to Remain: The Biopower of Migration Algorithms and Data Structures, Irene Fubara-Manuel

Session IV

Time:	Ottawa 12:15-13:45	Sheffield 17:15-18:45	Bremen 18:15-19:45
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In-Person Panel BP2 Engagements with Concepts in Data Studies (Bremen)

DOCK ONE (chair: Nikolaus Pöchhacker)

- **Understanding data studies: a conceptual and methodological inquiry into research on datafication**, Irina Zakharova
- **Sphere Transgressions: reflecting on Big Tech's growing influence on our society**, Tamar Sharon, Lotje Siffels, Marthe Stevens, Andrew Hoffman
- **Deliberate Data: A Critical Approach to Urban Data Collection for Visualization Practitioners**, Francesca Morini, Tobias Kauer, Benjamin Bach, Marian Dörk

Online Panel BZ6 Data, place and space (Bremen)

(chair: Yana Boeva)

- **Taking a Critical Look at the Critical Turn in Data Science: From Data Feminism to Transnational Feminist Data Science**, Jasmina Tacheva, Sucheta Lahiri
- **Public security devices and datafication in the city of São Paulo**, Iara Schiavi, Sérgio Silveira
- **An updated discussion of 'Public Participation Geographical Information System' (PPGIS): The Power of Crime Data for Marginalized Communities**, Andrea Adams, Elsa Marie D'Silva

Online Panel OZ7 Data in everyday life (Ottawa)

(chair: TBD)

- **Tracing Dynamics of Power in the Datafication of Later Life**, Nicole Dalmer
- **Data justice through (dis)engagement in information services for crises response**, Jorge Rojas-Alvarez, Danielle Chynoweth, Lynn Canfield, Anita Say Chan
- **Coffee Roasters' Data Vernacular: On the Entanglement of Digital Data and Craft**, Karin van Es

Day 2 - Bremen

Thursday June 23

Welcome

BLOCK ONE (Juliane Jarke)

Time:	Ottawa 2:55-3:00	Sheffield 7:55-8:00	Bremen 8:55-9:00
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Session V

Time:	Ottawa 3:00-4:25	Sheffield 8:00-9:25	Bremen 9:00-10:25
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In-Person Panel BP3 Discourses about Data Power (Bremen)

DOCK One (chair: Signe Sophus Lai)

- **The News Framing of Artificial Intelligence**, Dennis Nguyen
 - **Consider the Blackbox: Transparency as Value and Burden in Municipal Data Projects**, Lisa de Graaf, Iris Muis, Mirko Tobias Schäfer
 - **Infrastructures of data power: Revisiting the Twitter debate on data centers in the Netherlands**, Karin van Es, Jeroen Bakker, Daan van der Weijden
-

Online Panel BZ8 Data, place and space (Bremen)

(chair: Stine Lomborg)

- **“Critical Turn” in Geomatics and Geospatial Information Systems: An Epistemologically Sound Foundation for Sustainable Development Goals**, Stefano Calzati
 - **Beyond the scorecard diplomacy: From soft power rankings to critical inductive geography**, Natalia Grincheva
 - **Building Information Data Power: Sociotechnical Implications of Automated Space Production**, Yana Boeva, Kathrin Braun, Cordula Kropp
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Session VI

Time:	Ottawa 4:40-6:05	Sheffield 9:40-11:05	Bremen 10:40-12:05
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In-Person Panel BP4 Calls for interventions (Bremen)

DOCK ONE (chair: Dennis Nguyen)

- **Democratic control over Data and AI Projects in the Local Public Sector**, Elise Renkema, Iris Muis, Mirko Tobias Schäfer, David van den Berg,
 - **Exposing Data Power: Secrecy, Revelation, and Outrage in Whistleblowing Scandals**, Christian Pentzold, Charlotte Knorr, Margitta Wolter
 - **Analysing Data Power through Participatory Observation: A Call to Action**, Theo Röhle, Petter Falk, Iris Muis, Mirko Tobias Schäfer
-

Online Panel SZ9 Platforms and apps (Sheffield)

(chair: Monika Halkort)

- **The Strength of inconvenience: The German Corona-Warn-App and Luca-App as to two pathways to data governance**, Karoline Krenn

- **Decentralisation and Neoliberalisation: Artist-Audience Interaction in the Blockchain-Based Music Streaming Platform Audius**, Mick Vierbergen
- **Permanently suspended: Platform power and the demise of the public archive**, Anat Ben-David
- **Citizen Science and Research Data Management: Can You Fight Air Pollution with Data?** Olga Gkotsopoulou, Paul Quinn, Luka van der Veer
- **Social media, social (un)freedom**, João C. Magalhães, Jun Yu

Online Panel SZ10 Data and young people ([Sheffield](#))
(Chair: Ysabel Gerrard)

- **Cultures of data amongst UK university students: A case study of multiple stakeholder perceptions of data and learning analytics**, Matthew Thorpe
- **Young people's voices and the disruption of data's power**, Jill Robinson
- **Power over children's education data: Multi-stakeholder disagreements about children's data processing and best interests**, Sarah Turner, Kruakae Pothong, Livingstone

Session VII

Time:	Ottawa 6:20-7:45	Sheffield 11:20-12:45	Bremen 12:20-13:45
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Online ROUNDTABLE SZ11 Democratising decision making on data infrastructure: A Stakeholder ([Sheffield](#))
(chair: Julia Rone)

- Julia Rone, Jacky Liang, Janna Huang, Gina Neff, Hunter Vaughan, Lars Ruiter

Online Panel SZ12 Data infrastructures and assemblages ([Sheffield](#))
(Chair: Ruth Beresford)

- **Smart Cities, Data and Human Lives in the UK: An empirical case study**, Seamus Simpson
- **Data in Crisis: engaging tensions in risk, vulnerability, and resilience through data infrastructures**, Katrina Petersen, Agata Gurzawska
- **Automating the data subject: Under the radar digital advertising and social engineering techniques in Benjamin Netanyahu's Facebook Messenger chatbot**, Elinor Carmi, Anat Ben-David

Session VIII

Time:	Ottawa 8:00-9:25	Sheffield 13:00-14:25	Bremen 14:00-15:25
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In-Person Panel BP5 Empowering Data Subjects (**Bremen**)

DOCK ONE (chair: Roger von Laufenberg)

- **Critical is not political: The need to (re)politicize data literacy**, Fieke Jansen
- **"What could I have done: Refused?" Embedding agency affordances as mechanisms for refusal**, Ana Pop Stefanija, Jo Pierson
- **Living Proof: Data Practices of Community Organizers**, Roderic Crooks, Lucy Pei

Online Panel OZ13 Data publics (**Ottawa**)
(chair: Tracey P. Lauriault)

- **Trust in data - Trust in AI? A multimethod study on usage, acceptance and rejection of Artificial Intelligence**, Caja Thimm
- **Juking the Stats: Ethnographies of Disclosure Datasets**, Lindsay Poirier, Quinn White
- **Can data activism strengthen the agency of 'common' users? An empirical study of oppositional affordances and use positions toward Facebook**, Venetia Papa, Dimitra Milioni

Online Workshop BZ14 Data, Law and Decolonisation Workshop (**Bremen**)
(chair: Siddharth Peter de Souza, Tilburg University)

- Linnet Taylor, Siddharth de Souza, Aaron Martin, Hellen Smith

Session IX

Time:	Ottawa 9:40-11:05	Sheffield 14:40-16:05	Bremen 15:40-17:05
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In-Person Panel BP6 Data Governance and Data Subjects (**Bremen**)

DOCK ONE (chair: Irina Zakharova)

- **The Power of Simulation: Synthesising Ground Truth for AI Systems**, Roger von Laufenberg
- **Exploring Imaginaries of Data Subjects in Different Contexts: Contrasting Predictive Policing and Autonomous Cars**, Tayfun Kasapoglu, Mergime Ibrahim, Anu Masso
- **Continuing the critical tradition of alternative media? Alternative data governance projects between affirmation and critique**, Stefan Baack, Danny Lämmerhirt
- **Inequality in the datafied school**, Signe Lai, Sofie Flensburg, Victoria Andelsman

Online Panel SZ15 Platforms and apps 2 (**Sheffield**)
(chair: Monika Fratzczak)

- **The Disjuncture: Meanings around Smartphone Surveillance**, Ozge Girgin
- **How fears of datafication reinforce neoliberal individuality**, Priya Kumar
- **Fake popularity for real money: Data bubbles on Chinese digital platforms**, Xiaofei Han, Jiayi Hou
- **Data Power and the Image of Thought**, Emma Stamm

Online Panel OZ16 Cultures of data and information (**Ottawa**)
(chair: Merlyna Lim)

- **Materialising data relations in the home through hybrid methods**, Gaia Amadori, Giovanna Mascheroni, Lorenzo G. Zaffaroni
- **Subjectivities of search vs. Agencies of anonymity: Reimagining Google's cyberorganization through Tor**, Renée Ridgway
- **Towards a Values Based Theory of Data Governance for Civil Society Organizations**, Ushnish Sengupta

Keynote

GW2 B3009 (chair: Juliane Jarke)

Time:	Ottawa 12:00-13:30	Sheffield 17:00-18:30	Bremen 18:00-19:30
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- **BREMEN KEYNOTE** Room GW2 B3009: **Generative friction: exploring conceptual points of contact between computing sciences, social sciences, and philosophy**, Linnet Taylor, George Fletcher, Alexander Serebrenik, Akraati Saxena

Day 3 - Carleton

Friday June 24

Session X

Time:	Ottawa 3:00-4:25	Sheffield 8:00-9:25	Bremen 9:00-10:25
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In-Person Panel BP7 Data Power Relations and Control (**Bremen**)

DOCK ONE (chair: Stefan Baack)

- **Data legitimacy and the justification of police power**, Fieke Jansen,
- **Surveillance Platforms at Work: data and workers' control in Time Doctor and Teramind**, Fabricio Barili
- **Data-Driven Technologies in Institutional Context: The Case of CityZone in Tel-Aviv**, Tamar Ashuri

Session XI

Time:	Ottawa 4:40-6:05	Sheffield 9:40-11:05	Bremen 10:40-12:05
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In-Person Panel BP8 Transgressive Tech: Power shifts during the Covid-19 pandemic (**Bremen**)

DOCK ONE (chair: Linnet Taylor,)

Linnet Taylor, Aaron Martin, Siddharth de Souza, Joan Lopez Solano

BOOK LAUNCH

- **Room:** (Juliane Jarke)

Time:	Ottawa 7:45-8:45	Sheffield 12:45-13:45	Bremen 13:45-14:45
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- **BREMEN BOOK LAUNCH: New Perspectives in Critical Data Studies**, Andreas Hepp, Juliane Jarke, Leif Kramp w/ Discussant Tracey P. Lauriault

Ottawa Welcome & Keynote

Reader's Digest Resource Centre (Tracey P. Lauriault)

Time:	Ottawa 9:00-10:30	Sheffield 14:00-15:30	Bremen 15:00-16:30
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Opening Remarks: Joshua Greenberg, Director, School of Journalism and Communication, Carleton University

OTTAWA KEYNOTE: Data Sovereignty, Jonathan Dewar

Session XII

Time:	Ottawa 10:45-12:15	Sheffield 15:45-17:15	Bremen 16:45-18:15
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In-Person Panel OP1 Data and rights (Ottawa)

Reader's Digest Resource Centre (chair: Irena Knezevic)

- **Exploring Feminist Media Archives in the Age of Big Data**, Brianna Wiens, Shana MacDonald
- **Self-tracking Algorithm: Problematic Knowledge-making and (Dis)embodied Practices**, Elise Li Zheng
- **Assessing Power Relations and Digital Rights in Data-Centric Initiatives in Brazil**, Jess Reia, Luã Cruz
- **Youth As "Databound": Data Afterlives and the Right to be Forgotten**, Katie Mackinnon

Online Workshop SZ17 ROUNDTABLE Administrative data (Sheffield)

(chair: Susan Oman)

- Susan Oman, Kevin Guyan, Emiliano Treré, Marlee Ticheno

Online Workshop OZ18 Parc EX (Ottawa)

(chair: Pamela Robinson)

- **Gentrification and Data Power in Parc-Extension, Montreal**, Emanuel Guay, Yannick Baumann
- **The Parc-Ex Anti-Eviction Mapping Project: Data Activism and Counter-Mapping for Housing Justice**, Tamara Vukov, Sepideh Shahamati
- **Activist ecosystems vs AI ecosystems**, Alessandra Renzi, Janna Frenzel
- **Results from Digital Divides and Building Capacity**, Alex Megelas, Leonora Indira King

Session XIII

Time:	Ottawa 12:55-14:20	Sheffield 17:55-19:20	Bremen 18:55-20:20
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In-Person Panel OP2 Data and the state (Ottawa)

Reader's Digest Resource Centre (chair: Dwayne Winseck, Carleton University)

- **Deobfuscating State Security Surveillance Capabilities in Canada**, Evan Light
- **Automating Public Services: Learning from Cancelled Systems**, Joanna Redden
- **Emerald Extractivism: Borders, Energy, and Data Technologies in Ireland**, Patrick Brodie
- **Wiring the world: Facebook Connectivity between sovereignty and colonialism**, Guy T. Hoskins

Online Panel OZ19 Regulation and governance (**Ottawa**)
(chair: **Susana Vargas Cervantes, Carleton University**)

- **Prevalence of private interests in the Brazilian public consultation for regulating software as medical device: AI, digital health and data power**, Raquel Rachid, Luís Gonçalves, Leonardo Costa, Marcelo Fornazinm, Bruno Penteado
 - **Situated data values versus global regulatory trends: Exploring universalism versus specificity in Latin American data policy advocacy**, Katherine Reilly, Ana Rivoir, Maria Julia Morales
 - **Data culture or cultures of data? Libraries and archives between seduction and resistance**, Nathalie Casemajor, Guillaume Sirois
 - **Data Literacy in Civic Tech: Critical Understandings and Practices of Data in Civic Tech Initiatives**, Alejandro Alvarado Rojas
 - **Infrastructuring Data Publics: A Case Study of Open-Source Computational Programming Notebooks in Environmental Data Justice**, Alejandro Alvarado Rojas
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Session XIV

Time:	Ottawa 14:35-16:00	Sheffield 19:35-21:00	Bremen 20:35-22:00
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In-Person Roundtable OP3 Canadian Youth & Data Justice (**Ottawa**)
Reader's Digest Resource Centre (chair: self moderated)

- Leslie Shade, Jane Bailey, Valerie Steeves, Karen Louise Smith

Full Program w/Abstracts

Day 1 - Sheffield

Wednesday June 22

Welcome and Opening Remarks

Arts Tower LT1 (Jo Bates)

Time:	Ottawa 4:00-4:25	Sheffield 9:00-9:25	Bremen 10:30-11:55
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Session I

Time:	Ottawa 4:30-5:55	Sheffield 9:30-10:55	Bremen 10:30-11:55
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In-Person Panel SP1 Emotions of data and user perspectives (Sheffield)

Arts Tower LT1 (chair: Itzelle Medina-Perea)

- **Algorithmic Autobiographies and Fictions: A Method**, Sophie Bishop, Tanya Kant

Abstract: Our paper outlines methodological innovations and offers reflections from our research workshop entitled 'Algorithmic Autobiographies and Fictions'. Between 2018-2021 we have run these public-facing workshops in online/offline settings to over 200 participants. The workshops use creative writing and drawing techniques to allow social media users to 'meet and greet' their 'algorithmic selves', which are made up of the ad preference profiles that social media platforms create about their users.

Algorithmic selves are datafied formations of selfhood that do not only computationally mirror or represent individuals but also reshape individuals' online experiences - by determining how their profiles are brokered by first and third parties, what online content that are subject to and what marketing individuals might see and when. By using algorithmic selves to mobilize creative inquiry, we argue that researchers can better discern how technology users make sense of their data, the ways in which identity can be co-constructed by social media platforms, and how our interactions with technology ultimately shape social lives in meaningful and highly affective ways.

We offer three brief indicative findings, which enhance the points we have made about our methodology. Firstly, we note that workshop participants do overwhelmingly care about their data, and how to protect it. Secondly, participants predominantly find their own digital profiles to be absurd, and caricaturist — users' data profiles do not fit with their own understanding of their selves. This finding is in line with concurrent findings that the "underwhelming" accuracy of data profiling can prompt "algorithmic disillusionment" (Büchi et al., 2021). Lastly, the project has found that participants' creative outputs and discussions challenge popular understandings of data as scientific and objective. We find that profiling is sometimes crude and erroneous; a crudity that, as the workshops stress, still presents a myriad of social cultural issues for those profiled.

- **How do Period App Users Navigate Data Power in their Daily Lives?** Stefanie Felsberger

Abstract: People are often relegated to the role of 'user' in the dominant narratives about technology, although they remain important stakeholders in the conversation around data power and data commodification. In this paper, I focus on how users of period and menstrual trackers experience and navigate data power in their daily lives. I am mainly concerned with the question of how different users conceptualise and understand themselves vis-a-vis data power and within Surveillance Capitalism (Zuboff 2019). To do so, I look at two specific aspects of data power: first, data's power to count and data's presumed power to provide 'objective' knowledge; and second, data's economic power and value.

First, the premise of tracking apps to provide unique insights into people's bodies rests on data's power to count. In my paper, I analyse the ways in which users understand and enact this relation between data power, knowledge, and their bodies. I ask how the data-mediated engagement with the body changes people's relation to themselves. Second, data's economic value is closely tied to data's power to provide unique insights. Tech companies have amassed great capital through the commodification of data generated by people in their daily lives: this data is either sold as a commodity or used to gain insights into human behaviour which are in turn bought and sold. What stakes do users hold in their own understanding and how do they navigate the unfolding processes of data tracking, analysis, and commodification? I argue that most users have very individualised understandings of the harm of data power can have in their and other people's lives. Finally, I offer solutions towards more collective approaches to resisting data power and commodification. My contribution is based on interviews conducted with around 30 different app users in Vienna, Austria as part of my PhD research.

- **Intertwined Relations: The Merging of Data, Embodied Sensation, and Emotion**, Xiufeng Jia

Abstract: This paper explores what self-tracking data mean to people in their everyday life, and how they feel about their data. The paper will discuss the findings of a thematic analysis of 30 interviews of ordinary people in China who use digital self-tracking technologies for a plethora of everyday activities and various and bodily functions. The paper aims to fill the gap of self-tracking studies which mostly focus on western societies and address the following questions:

Does the data influence self-trackers' emotions pertaining to their bodies? Do people trust the data when it contradicts their feelings? What a role does the data play in people's emotional and physical health?

Digital self-tracking data are seen by people as a way to help them reflect on their embodied sensations, and as the data can also stir people's emotions, it influences their feelings and actions with regards to self-tracking data practices and everyday activities. In turn, embodied sensations and emotional responses towards self-tracking data are intertwined with the data itself, resulting in them working together to influence people's engagement with self-tracking practices, and how people make sense of and use their data.

This paper has built on three concepts: Btihaj Ajana's concept of "body quantification", Deborah Lupton's concept of "data sense", and Helen Kennedy's concept of "feeling numbers". By bringing these together, it is helpful to explore data power and embodied power. Sometimes self-trackers have agency about their embodied sensations and emotions which causes them to question the data, and sometimes data have agency that self-trackers sometimes override their embodied sensations and emotions in favour of what the data says. By discussing findings of relationships between data, embodied sensations, and emotions, this paper focuses on "agency", which is an important factor in data power relations. This paper argues that it is difficult to separate these three aspects, and that agency is complicated and fluid between them.

- **Emotional responses to data visualisations about climate change in two different national contexts**, Monika Frątczak

Abstract: The recent increase in private, public and political use of data and the increased circulation of data through visual representations indicate that the study of data visualization is gaining importance as a research subject. Despite this, there has been little sociological contribution to the understanding of everyday experiences of data visualization. Data studies has been characterized by studies of the top-down operations of data power and by a related absence of attention to experiences of data 'from the bottom up'. In this context, understanding the role emotions play in engagements with data visualization is important, as a number of practitioners and scholars argue (such as D'Ignazio and Bhargava, 2020; Kennedy and Hill, 2017). To address this gap, my research explores emotional responses to data visualizations in two different national contexts in the United Kingdom and Poland. It does this through a focus on climate change, investigating data visualization about climate change produced by climate and environmental organizations from the UK and Poland. I explore whether these data visualizations have an emotional impact on people, and whether and how they can prompt civic mobilization and political

participation. This empirical study uses a comparative mixed qualitative methods approach. This includes a social semiotic analysis of thirteen climate change data visualizations from the six climate and environmental organisations, nine semi-structured interviews with data visualization professionals from these organisations, thirty-four semi-structured interviews and twelve follow up interviews with diverse user participants from the UK and Poland who responded to these data visualizations on social media. In my presentation, I will discuss how national and demographic differences can influence audiences' emotional engagements with data visualizations and their (potential) mobilisation.

Online Panel BZ1 Regulation and governance (Bremen)
(chair: Karin van Es)

- **Big Data in criminal investigations: “European Imaginary” and orientations for the future**, Laura Neiva

Abstract: Through an interpretative and comprehensive analysis of the General Data Protection Regulation 2016/679, the European Directive 2016/680, and European Commission discourses that frame this legislation, this paper reflects on the “European Imaginary” around Big Data, technologies, and data protection in the context of criminal investigations. Based on the concept of “sociotechnical imaginaries” I explore the following questions: i) What are the political, social, and ethical commitments revealed in EU legislation? ii) How notions of public good and citizenship emerge? and iii) How potentially contradictory principles between security and civic liberties are combined in legislation? In particular, I analyze how the risks and benefits of new technologies are described in these contexts and the controversies that emerge around, on the one hand, defining security standards and, on the other hand, managing the social impacts of technologies. I conclude that political visions express “European Imaginaries” that implementing Big Data and technologies into crime-fighting will improve criminal investigations. This analysis maps European trends of governance processes and identifies the sociotechnical imaginaries that project and symbolically build “European needs” of risks and benefits in security societies. Finally, considering the ethical, legal, and social debate, I propose orientations for the future of Big Data regulation in criminal investigations. Namely, the need for designing responsible governance strategies that result from deliberations with different stakeholders and guided by principles of transparency and citizen engagement.

- **“Whose time and space?” Exploring discourses on experimental legal regimes in Russia**, Dmitry Muravoyv

Abstract: “Living labs,” “regulatory sandboxes,” and other forms of ad hoc governance of digital technologies and data have been proliferating across the globe to ‘scale up’ innovations (Pfotenhauer et al. 2021). This tendency as exercised through the living labs and regulatory sandboxes’ approach, while initially originating in the Western world, is now present in other contexts, such as Russia. In July 2020, a law on “experimental legal regimes” has been adopted by the federal parliament creating legal and economic mechanisms for making such sandboxes possible.

In the existing scholarship on temporality and digital technologies, scholars have addressed inequalities inherent both in discourses about time distribution and in the material practices behind it (Rosa, 2003, Andrejevic et al., 2020). Alternatively, other scholars, focusing on the issues of spaces, have looked at how such regulatory sandboxes in the process of their enactment, remake territories and subjects (Laurent & Tironi, 2015, Engels et al., 2019). In this paper, I address the interconnection between temporality and space as it pertains to the redistribution of power between the state, the business sector, and the citizens while advancing “tech business experimentalism” (Laurent et al., 2021). By drawing on the analysis of Russian public discussions about regulatory sandboxes and their media coverage, I focus on the discursive construction of the heterogeneity of time and multi-layered space to demonstrate the shifting roles that citizens, state, and business actors are intended to take on in the experimental legal regimes.

- **A Hippocratic Oath for Data Ethics: What is it, what does it replace, how would it work?**
Jethani Suneel

Abstract: This paper reports on research that critically engages with the idea that the Hippocratic oath from medicine can be practically reused as a policy mechanism for data ethics. At its core, the idea is that data stewards should swear a professional oath as a means of ensuring that their data practices are ethical. This idea is often raised either without specifics, or by reciting the phrase "do no harm"; it is aimed at practitioners as individuals, often as employees; and we have yet to find a case where a specific cost for breaking the oath is clearly expressed. The idea of the has been raised in Wired, by senior figures at Microsoft, and by the European Data Protection Supervisor as a soft regulatory mechanism. The idea of an oath suggests that practitioners must act in the best interests of data-subjects, avoid self-interest, and maintain the integrity of a "profession".

Our paper reports on research findings from a pilot study with practitioners and a narrative discourse analysis about how the oath is discussed and described in various contexts. We discuss how a Hippocratic oath affects practitioners as employees including suppressing political activity and atomising the profession, contextualising this against historic worker activism in the tech sector.

The conclusions we draw are not wholly opposed to an oath, but we do see significant limitations. we argue that there are significant limitations to the notion that an oath-like mechanism could effectively prevent data harms. Its benefits to firms over both employees and data-subjects suggests that its main appeal is as another device to condition employees and defer responsibility downwards onto 'bad apples'.

Online Panel SZ2 Data Justice and Colonialism ([Sheffield](#))
(Chair: Ysabel Gerrard)

- **The de/construction of First Peoples' and LGBTQIA++ identities in Google's machine learning** Bronwyn Miller

Abstract: This research seeks a safer online environment for those marginalized under settler-colonialism that is led by engagement with First Peoples' and LGBTQIA++ communities, who set priorities for this data and ultimately decide the direction of the research and the meaning of a 'safer' online future. Although there have been increasing calls to centre 'marginal' internet users in research on algorithmic and data discrimination – there is more work to be done in aligning conceptions of social justice in Data Justice with the priorities set by First Nations and Queer communities themselves who experience the harms of colonial heteropatriarchal AI/ML technologies.

Initially this research examines what semantic connections Google's recommendation system produces or omits for First Peoples' and LGBTQIA++ identities and how Google discursively constructs problems of AI/ML discrimination. This aims to empower relevant communities to critically discuss (in yarning circles) online discrimination, Google's automated construction of identity, and the ways' identity groups are increasingly harmed by Google, not only through technological 'glitches' but through the methods intended to remedy these injustices. During community engagement sessions (conducted throughout 2022), I employ a Data Justice approach that decentres Google's algorithm and foregrounds questions self-determination in the context of racism, trans/queer/homophobia. This is because Google's AI/ML discrimination is not a new type of harm but, rather, is a new technological technique that supports a discriminatory society. Therefore, it is vital that conceptions of data justice involve the communities for whom they seek justice.

Rather than an anti/de-colonial or anti-capitalist position, this research highlights how solidarity with Indigenous priorities, e.g., self-determination, Indigenous data sovereignty, meaningful intergenerational care for Elders and Country, support the anti-oppressive aims of anti-capitalist, decolonial theory and Queer theory but move researchers from a position of allyship to one of

solidarity. This research also contributes to the Data Justice framework by foregrounding the settler-colonial context, through working with and being led by Indigenous participants and experts and by implicitly critiquing decolonial methods in Data Justice that do not involve Indigenous leadership and perspectives.

- **Race, Death and Epistemic Justice in Machine Sensing and Environmental Research,** Monika Halkort

Abstract: This paper discusses the material-semiotic qualities of digital infrastructures and datafication drawing on examples from marine science in the Mediterranean Sea. The combined impact of rising sea levels, industrial pollution, and global warming has put in place a dense network of mobile instrument platforms and environmental sensors attached to buoys that are monitoring sea temperatures, salinity and oxygen levels, and loss of biodiversity resulting from climate change. Against this backdrop I explore what the rising number of environmental sensors and satellite systems may bring to the struggle for epistemic justice in the face of competing pressures, i.e. climate change, depleting natural and energy resources, loss of biodiversity and the human cost of irregular migration, that have made the entanglement of human and non-human agencies abundantly clear.

The ever more refined ways for measuring and mapping metabolic lifecycles through the medium of electromagnetic waves have enabled scientists to observe layers of bio/geological activity that would otherwise be inaccessible to humans. They have opened up ways of knowing and engaging with modes of existence on the level of the microbial and the subatomic that allow for a relational, multi-scalar, and processual understanding of life, non-life, and death. With this in mind, my presentation will unpack the multiple layers of transcription, encoding, interpretation, and inferences at work in machine sensing and vision as they convert nature and the environment into machine-readable form. Remote sensing devices, as I will show, never produce a transparent object ready for observation but rather they enrol spaces for calculating and administering life and death on the level of biophysical and biochemical processes and relations that selectively (re)assemble objects, environments, energies, and bodies into regimes of intelligibility where the values, meaning and legitimacies attached to life and death are currently (re)negotiated, reconfigured and codified. Seen this way digital infrastructures of environmental sensing and Earth observation need to be recognized as critical sites where some death can be naturalized while nature is historicized a direct result of the ways in which electronic wavelengths are converted into data textures that can be computed and visualized.

- **The Data Center Cannot Hold: Data Colonialism and the Nimbus Project,** Dan Kotliar, Alex Gekker

Abstract: In her now-classic paper, Susan Leigh Star (1999) called upon sociologists to study the "boring things" in life, such as bridges, sewer grates, and classification schemes. This has led to the so-called infrastructural turn in media studies (Hesmondhalgh, 2021), focusing on both material and social invisible practices that underpin communicative technologies. Nothing epitomizes this turn more than the object of our paper – data centers (Holt & Vonderau, 2015). These mundane structures are built to accommodate the computer servers, wires and accompanying equipment to route traffic, analyze data and serve content to internet companies and users. Once erected, they are largely nondescript, and to the outside view, they are profoundly boring.

This paper explores six of such boring data centers, currently built in Israel as part of "Project Nimbus" – a \$1.2 billion tender offered by the Israeli government to move its computational infrastructure "to the cloud". The tender was won by Amazon Web Services (AWS) and Google Cloud, and has drawn considerable attention, both due to its high-cost and technical complexity; and due to attempts by these companies' workers to curtail the tech giants' involvement in Israel/Palestine on moral grounds. Power differentials are also present within the Israeli society, as intimate governmental data will be processed and stored by foreign US companies.

These nested questions of data sovereignty and extraction are particularly resonant with the rising theories of "data colonialism" (Thatcher et al., 2016). Yet, the notion of data colonialism is complicated within project Nimbus, when lines blur in terms of whose data is colonized by whom, whose lands are used (and colonized) by these centers, and whose resources (predominantly electricity and water) will be used for their functioning.

Based on thematic analysis of various sources, we delineate the concrete materialization of cloud infrastructure to offer a more nuanced understanding of data colonialism, and of the different actors and stakeholders involved in the creation and sustainment of this emerging global regime.

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Session II

Time:	Ottawa 6:10-7:35	Sheffield 11:10-12:35	Bremen 12:10-13:35
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In-Person Panel SP2 Data practices – mitigating harm (Sheffield)

Arts Tower LT1 (chair: Chisenga Muyoya)

- **Lessons in mitigating algorithmic bias from the field**, Ruth Beresford

Abstract: In recent years, public sector services have increasingly used data-driven algorithmic methods to undertake or expand on work traditionally performed by human workers. Alongside these developments is increasing evidence they can reproduce and entrench dominant power structures – enforcing oppressive conditions around factors such as race, gender, class, and disability.

In this paper, I will discuss my initial findings from a project with practitioners and experts actively working towards ethical AI in the public sector which explored what was considered good practice. Participants were practitioners working on the Aurora AI project by the Finnish Ministry of Finance (n=7) in different disciplinary capacities, and algorithmic justice organisations Ada Lovelace Institute and Data Justice Lab in the UK (n=6). The interviews focused on drawing out practical examples of working practices aimed at avoiding algorithmic bias and understanding how these fitted into their overarching ethical strategy.

The findings suggest even in this purportedly progressive project, there is a lot of disagreement about what constitutes best practice in mitigating algorithmic bias and which types of solutions might be practically implementable. Participants had differing opinions about definitions of bias and discrimination, with more technical participants focusing on accessibility or legal frameworks. These differences in understanding, combined with systematic issues such as funding and organisational structures, left more socially focused participants feeling ethical concerns were sidelined. I argue that efforts to mitigate bias are thus hampered by a lack of a shared understanding of the core terms, concepts, and potential impacts of these technologies, and that further work is required to create a shared understanding of these things across stakeholders with often disparate skillsets.

- **Data and AI for Good initiatives as cases studies of promoting computational technology**, Ville Aula

Abstract: Promises associated with computational technologies in social contexts are not a feature of technology, but products of concerted efforts to promote and apply new technologies as solutions to specific social promises. These concerted efforts can take many organizational forms, such as promotional initiatives, networks, associations, movements, projects, or programs. In this paper I discuss the importance of studying the power of promotional initiative as case studies of computational technology in social contexts. Many such initiatives hold a central position in developing and promulgating new ideas and practices, thus making them important beyond their immediate context. To provide an example of the strategy, the paper empirically examines the emergence “Data for Good” and “AI for Social Good” initiatives. Data for Good and AI for Social Good initiatives promote the use of computational technologies as a solution to social problems, commanding financial resources, publicity, and networking opportunities for practitioners who align with their interests. They are a new iteration in a long chain of initiatives that promote digital technologies as solutions to social problems. Nevertheless, Data and AI for Good initiatives are far from having a unified understanding of what constitutes social good or what kind of computational techniques are important. As case studies, Data and AI for Good initiatives thus exhibit three qualities that are important to further theorization and analysis of data power: 1) how initiatives that claim novelty in computational technology are tied to other past and current initiatives 2) how promotional initiatives shape our understanding of computational solutions to social problems in specific contexts 3) how promotional initiatives diverge from each other as a result of ongoing dialogue between aspirational goals and practical applications.

- **Data-driven Real-time Profiling: Manipulation or Legitimate Influence?** Jiahong Chen, Lucas Miotto Lopes

Abstract: Knowing when to say or do something is often just as important as knowing what to say or do. While timing one’s words and actions can be a sign of wisdom, it can also be an indication of controversial strategies to create influence. The increasingly pervasive collection of personal data has enabled business to time their messages and actions, such as a surge in price or request to review, in a hyper-personalised manner.

Such practices proved to be controversial because they have sparked intuitive reactions that have considered them manipulative. It is however not entirely clear whether, simply by observing the subject and timing the moves, such data-driven techniques fall within the notion of manipulation. Nor is it clear whether it would make any difference if the same sort of action is performed by an automated system. In this paper we will analyse the morality of what we called “real-time profiling”, a practice whereby individuals are profiled with real-time data so the human-computer interactions can be timed at the “optimal” moment.

Building on the literature on the wrongness of (online) manipulation and digital ethics more generally, we will explain what makes real-time profiling wrong. Our account presents a unique theoretical lens that help us understand both how data-collection contributes to the wrongness of practices like real-time profiling and the form of power online manipulators have over online subjects. To do so we introduce the notions of psychological hijacking and gateway wrongs and argue that, while not necessarily giving rise to a structurally dominant relation between the profiler and profilee, real-time profiling creates a form of illegitimate transient power that subjects the manipulatee to the unilateral intention of the manipulator.

The discussion over this form of illegitimate transient power has legal implications. The principle of fairness (or legitimacy) is a cornerstone in many areas of law, such as consumer protection and data protection law, but regulatory initiatives would require a normative demonstration of the unfairness (or illegitimacy) created by real-time profiling. In the last part of our presentation, we will look at the promises and limitations of addressing the challenges in these traditional areas of legal regulation before we turn to the EU’s proposed Digital Services Act and Artificial Intelligence Act to explain why they could represent a (perhaps missed) opportunity.

- **Democratising Data-driven Governance: Citizen Assemblies and Data Power**, Arne Hintz

Abstract: Knowing when to say or do something is often just as important as knowing what to say or do. While timing one's words and actions can be a sign of wisdom, it can also be an indication of controversial strategies to create influence. The increasingly pervasive collection of personal data has enabled business to time their messages and actions, such as a surge in price or request to review, in a hyper-personalised manner.

Such practices proved to be controversial because they have sparked intuitive reactions that have considered them manipulative. It is however not entirely clear whether, simply by observing the subject and timing the moves, such data-driven techniques fall within the notion of manipulation. Nor is it clear whether it would make any difference if the same sort of action is performed by an automated system. In this paper we will analyse the morality of what we called "real-time profiling", a practice whereby individuals are profiled with real-time data so the human-computer interactions can be timed at the "optimal" moment.

Building on the literature on the wrongness of (online) manipulation and digital ethics more generally, we will explain what makes real-time profiling wrong. Our account presents a unique theoretical lens that help us understand both how data-collection contributes to the wrongness of practices like real-time profiling and the form of power online manipulators have over online subjects. To do so we introduce the notions of psychological hijacking and gateway wrongs and argue that, while not necessarily giving rise to a structurally dominant relation between the profiler and profile, real-time profiling creates a form of illegitimate transient power that subjects the manipulated to the unilateral intention of the manipulator.

The discussion over this form of illegitimate transient power has legal implications. The principle of fairness (or legitimacy) is a cornerstone in many areas of law, such as consumer protection and data protection law, but regulatory initiatives would require a normative demonstration of the unfairness (or illegitimacy) created by real-time profiling. In the last part of our presentation, we will look at the promises and limitations of addressing the challenges in these traditional areas of legal regulation, before we turn to the EU's proposed Digital Services Act and Artificial Intelligence Act to explain why they could represent a (perhaps missed) opportunity.

In-Person Panel SP3 Living with Data panel (Sheffield)

Arts Tower LT2 (chair: Helen Kennedy)

- **Findings from the Living With Data project**, Hannah Ditchfield, Susan Oman, Helen Kennedy, Jo Bates, Itzelle Medina-Perea, Aidan Peppin

Abstract: Understanding what people know, think and feel about personal data uses (that is, how data about them is collected, analysed, shared and used) can inform data power interventions and minimise related harms. In other words, thinking about data power should be informed by the perspectives of the people upon whose data datafication depends. Living With Data explored different people's thoughts and feelings about different data uses, and asked what fair data uses look like from non-experts' perspectives. It undertook a programme of research incorporating a literature review, mapping data uses in public sector contexts, surveys of 2000 respondents in the UK administered over two consecutive years, and qualitative interview and focus group research with over 100 participants. This panel focuses on these questions: 1) what's the relationship between awareness of and attitudes towards data uses 2) how do people come to understand data uses? 3) what can everyday experiences tell us about data power? 4) does fairness matter? Four short presentations about our findings are followed by reflections by discussant Aidan Peppin from the Ada Lovelace Institute about the implications of our findings for policy.

Online Panel SZ3 Data Science: modelling, algorithms, AI and automation ([Sheffield](#))
(Chair: Ysabel Gerrard)

- **Models of ecological crisis: Climate uncertainty and the gist of “What if,”** Rolien Hoyng

Abstract: This presentation works from empirical analysis of the affordances and disaffordances of concrete data-centric models to a generalized critique of uncertainty in ecological crises and its governance. How ecological issues are modeled matters because models do not simply depict an external reality but act as tools of orientation toward, and intervention in, that reality. I analyze the adaptation of modeling technologies in the management of ecological crises, taking climate change as my example, to consider how modeling technologies translate ecological uncertainty into figures of opportunity and risk. Uncertainty in climate change projections stems from nonlinear, complex interactions between facets of ecosystems and human behavior (from economics to politics) that render developments fickle and unstable. In addition, knowledge about such ecological developments and the impact they may have been never certain but remains speculative. Indicating the dual nature of uncertainty, the United Nations International Panel on Climate Change (IPCC) considers uncertainty both in terms of degrees of likelihood (probabilities of outcomes) and degrees of confidence in knowledge. My analytical starting points for unpacking the workings of models and formulating a critical theory of ecological modeling consist in quantification, metrification, and procedurality (“if/then”). Moreover, models are offered in a speculative manner and remain bracketed. During both moments of model design and implementation, the seeming rigidity of the “if/then” flow of algorithmic computation dissipates in much more experimental and speculative dynamics in the gist of “what if.” This speaks to how modeling technologies are shaped by ecological uncertainty, while this also can overwhelm them. As I will argue in this presentation by drawing on critical new materialism, dreams of all-encompassing mega-models notwithstanding, uncertainty reflects in technological disaffordances and unequal distributions of neglect and harm.

- **The French data labour subcontracting value chain: AI firm governance and data power inequalities** Clement Le Ludec

Abstract: Artificial intelligence is a set of advanced techniques considered as a powerful technology to transform our society and especially labor (Frey and Osborne, 2017; Brynjolfsson et al., 2017). While the debate on the scale of AI effects on work is still open (Autor, 2015), we have very few empirical studies on this transformation. We contribute to this debate by analysing new occupations and new value creation systems related to artificial intelligence, especially regarding data collection activities.

As the sector became more industrialized, firms create their globalized value chains. Thus, Northern countries AI companies rely on a precarious workforce situated in Southern countries to collect and annotate data (Gray and Suri, 2019; Berg et al., 2018). We investigate the AI value chain in France, analysing who are the data labor stakeholders and how they are interacting with each other. Ultimately, we aim to understand which kind of inequalities does this process is producing for data workers?

We rely on interviews conducted with French AI start-up (30), with annotation companies executives (6) and workers (28) situated in Madagascar. We show the distribution of inequalities in the AI sector, with big tech firms governing the value chain creating big AI models, and French start-up using those models to do « last-mile automation » with « ground truth » data collected among precarious workers and final clients of deployed AI systems. In the process, data workers get a very tiny share of the value created.

AI sector industrialization creates new ways of value extraction from free or poorly paid labor allowing companies to « get something for nothing ». In the French context, we show that French AI companies rely on one side on US technologies and on the other side on a post-colonial organization of work with southern countries workers producing data labor feeding French models.

- **Human-centered ADM research? Foregrounding a peoples' perspective**, Stine Lomborg, Anne Kaun

Abstract: This paper takes stock of automated decision-making (ADM) research across fields identifying central concerns and methods while outlining a stable baseline for future research on the data power of such systems. We argue that contemporary scholarship of ADM is siloed within disciplines. Humanistic and social science scholars have mainly engaged theoretically and critically with ADM systems. Scholarship has found data-driven innovations and ADM systems to be instrumentally focused on optimization for business and government, raising questions of explanatory power, citizen rights, and accountability (Evans & Kitchin 2018, Moore 2018, West 2019). Recent scholarship has highlighted questions of human agency as key challenges of ADM (Lomborg et al. 2020, Velkova & Kaun 2019). Yet, pursuit of the good life and human flourishing—defined in terms of “the ‘capabilities’ of persons to live the lives they value” (Sen 1999: n.p.) through these systems—have been largely neglected (Kennedy 2018). Computer science and engineering research is similarly concerned with optimization, albeit pursuing an applied research agenda: designing better automated workflows (Kulkarniet al. 2011), improving algorithmic performance with training data (Ashour & Kremer 2016), and building data ethics and accountability measures into these systems (Veale et al. 2018). Some of this work has more optimistic outlooks to the human and societal benefits of automation.

Yet both silos of ADM seemingly echo Langdon Winner’s (1978) idea of ‘reverse adaptation’, wherein humans adapt to the power of the technological system and not the other way around, leaving little scope for human agency and capacity for change. Agency and is nonetheless documented in people’s responses and resistance to ADM systems and should inform a general pursuit of ADM for equity, justice and human flourishing taking diverse capabilities into consideration (Angele 2017). We propose that it is through empirical work on the relationship between technological infrastructures for ADM and people’s expectations, responses and actions that systemic powers and biases can be untangled and adequately addressed. By extension, human-centered visions of ADM must start with empirical research from the perspective of the people it implicates—the infrastructural engineers and designers of ADM systems, the case workers who collaborate with ADM systems in making decisions about welfare and service provision, and the people whose data feed the systems and who are targeted in processes of automation.

Session III

Time:	Ottawa 8:50-10:15	Sheffield 13:50-15:15	Bremen 14:50-16:15
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In-Person Panel SP4 Data and information circulation (Sheffield)

Arts Tower LT1 (chair: Chinsenga Muyoya)

- **Search engines, online archives and the ‘right to be forgotten’: an ever-tightening embrace**, Irini Katsirea

Abstract: In its 2014 landmark judgement in Google Spain, the Court of Justice of the European Union (CJEU), found in favour of a Spanish lawyer who requested Google to dereference information concerning past debts. Search engines at the receiving end of dereferencing requests have been required to refrain from indexing information, which was previously retrievable on a name-based search, thus affecting the source websites’ right to freedom of expression. In the meantime, both national and European courts have expanded the ‘right to be forgotten’, casting an overly broad net over press archives. This right was initially justified on the basis of search engines’ unique ability to provide universal access to information in a manner that enables a near to complete profiling of the data subject. Precisely this propensity is absent in the case of online news archives. By approving of the interference with the underlying content, courts have elided the difference between source webpages and search engines and have ignored the distinct functions they perform. At the same time, while search engines have the capacity to block access to specific content upon a name-based search, this does not currently apply to the originators of this content who have no such way of selective filtering. This paper proposes to discuss recent

case law of the European Court of Human Rights and German courts, the ways in which they have proposed to harness search engines' and press archives' data power, and the implications for freedom of expression and press freedom.

- **When Friction Becomes the Norm: Antagonism, Discourse and Planetary Data Turbulence**, Sebastian Lehuédé

Abstract: The ideal of unfettered data circulation has fallen into crisis. A growing number of actors are working to exert greater degrees of control over the global data pipeline for political and economic purposes. Combining critical data studies and post-Marxist theory, I identify the current technopolitical conjuncture as one of 'planetary data turbulence' in which divergences regarding data governance have become the norm. The platformisation of the web, the adoption of sovereignty principles and an increased environmental awareness are some of the forces generating such a turbulence.

The presentation develops an analytical framework to explore this conjuncture's workings in a way that acknowledges its profoundly political dimension. While previous studies of 'data friction' have emphasised the many conflicts surrounding data use, the primary focus on technical actors and materiality across these works render them ill-equipped for application in the current conjuncture. Turning to Ernesto Laclau and Chantal Mouffe's take on conflict, I propose antagonism and discourse as two relevant categories for the study of contemporary data friction, capable of capturing a broader range of actors and discords generating planetary data turbulence. Finally, I demonstrate the strengths of this framework by referring to the articulation of digital sovereignty in China, Russia, Europe and Latin America. These cases reveal the relevant role of longstanding geopolitical conflicts (antagonism), particularly the challenge to the US hegemony, in policies and developments restricting the circulation of data. At the same time, the reviewed cases indicate that the rise of digital sovereignty encompasses a struggle over the very meaning of 'sovereignty' in the digital environment (discourse), with different articulations proposing the state (China and Russia), the individual (Europe) or collective entities (Latin America) as the central subject of self-determination.

- **The Power of Algorithms in Crises: Digital Ethnography on the Agency of Algorithms in the Case of the Christchurch Attacks**, Minttu Tikka, Henna Paakki, Kaisla Kajava

Abstract: In this paper, we examine the role that algorithms play in the amplification of harms in the events of terrorist violence. Today, violent attacks are increasingly mediatized and datafied. This means they are conditioned by and embedded in digital media platforms and their affordances that rely on logics of the attention economy to increase viewer engagement (Davenport & Beck 2001). During violent events, data is produced and amplified through algorithmic distribution mechanisms that allow global reach for ideas and events. By capitalizing on violent material, algorithmic systems can amplify the homicidal fantasies and messages of hatred and racism. The role of non-human actors in crises has not yet been widely studied. The connection between algorithms and amplification of social harms in the context of crises is often ambiguous and, thus, a methodologically challenging field of research as algorithmic systems operate subtly behind the user-interface (Markman & Grimme 2021). However, as algorithms have a tremendous effect on how we collectively focus our attention and socially construct our reality through social media data (Citton 2007), the role of these non-human actors in societal crises needs more research. To examine the power of algorithms in crises, we investigate the Christchurch Mosque attacks from the perspective of human-algorithm interaction. We conducted digital media ethnography and observed how the events unfolded in real-time on social media. In 2019, a terrorist attack in Christchurch, New Zealand, was live-streamed on Facebook by the perpetrator. As intended, the video of the massacre spread effectively across the digital media environment through a mechanism of automated speed (Munn 2019). With every view, recommendation algorithms boosted the visibility of shocking and engagement-producing data (Saurwein & Spencer-Smith 2021). We state that algorithms function as human-made non-human agents, creating a circle of data, where the algorithm harvests user input, generating an output of user engagement, which then in turn becomes the next input. Through this process,

the algorithm gains more agency through specialization, yet that agency lacks any ethical responsibility for its consequences. Based on empirical fieldwork we offer a critical reading on how algorithmic agency can strengthen the harmful effects of violent attacks and enforce the power of platforms with problematic ethical implications.

In-Person Panel SP5 Data practices – health and disability (Sheffield)

Arts Tower LT2 (chair: Hannah Ditchfield)

- **Patterns in Practice – beliefs, values and feelings in practitioners’ engagements with data mining for drug discovery**, Jo Bates, Itzelle Medina Perea, Helen Kennedy, Erinma Ochu

Abstract: In what ways do culturally situated beliefs, values and feelings shape data practitioners’ engagements with predictive machine learning in different contexts of practice? And, in what ways do these “data cultures” influence relations between differently situated groups of practitioners and the people impacted by their work? These are questions we aim to answer on Patterns in Practice, based on ethnographically informed work across three cases. In this paper, we will discuss early findings from our first case study – pharmaceutical drug discovery.

The use of AI techniques in drug discovery has a long history with waves of interest dating back to the 1960s. However, similar to other domains, the last couple of decades has seen renewed interest fuelled by the rapid growth of available data, the increase in computing power, the development of new methods for processing data, and the optimisation of machine learning algorithms.

These developments have provoked mixed reactions within the drug discovery community. They have brought excitement and enthusiasm, but also fear, anxiety and scepticism. Many have argued that the current AI hype overlooks many limitations of these techniques and raise concerns about their black-boxed nature. Such beliefs, values and feelings play out as complex power dynamics among practitioners across the drug discovery pipeline.

We will present our early analysis of a series of interviews, focus groups, diaries and observations with a team working on a drug discovery project at a major UK pharmaceutical company, reflecting on how our participants’ beliefs, values and feelings about machine learning techniques and practices in this context are shaping their culture of practice and how they relate to one another, and the people impacted by their work. We will conclude by sharing our reflections to the conference’s focus on data power relations.

- **Imagining alternative data practices for understanding the experience of disability and improving accessible societies**, Denis Newman-Griffis

Abstract: One in six people worldwide lives with disability, and continuing improvements in medicine and living standards are contributing to both higher incidence of and more years of life lived with disability. Disability is a lived experience, including interactions between a person, their environment, and activities people engage in. The experience and identity of disability is unique to each person, and the term “disability”—or being disabled—can mean many different things to different people. However, despite the multiple synergistic models and perspectives that have been developed to define and understand the experience of disability, the overwhelming majority of data collected in healthcare, government, and employment settings reflect the traditional and stigmatizing medical model, in which disability is understood as an inherent attribute of a person, and a problem or deficiency to be “fixed” through intervention. This perspective not only stigmatizes and dehumanizes people with disabilities, but also strips them of agency in the process of negotiating alternative, more accessible environments and policies that enable participation in life without restrictions.

In imagining alternative data practices that re-center the agency and the lived experience of people with disabilities, we must first confront foundational questions of what conceptual model or models of disability can best support this goal, and how such models can be translated into a praxis of data collection, management, and analysis. The social model of disability presents a promising potential common ground to bring together the experience and decision-making processes of

people with disabilities, policymakers, and healthcare providers, but each of these stakeholders understands this model through different and conflicting lenses. I explore points of conflict in how disability may be conceptualized by each of these stakeholders and present a plan for a stakeholder engagement study to begin to define a common framework for data collection, representation, and analysis.

- **A critical analysis of the role of expectations about data in shaping health data flows in the UK healthcare sector**, Itzelle Medina Perea, Jo Bates, Andrew Cox

Abstract: Patient data produced in the UK healthcare sector is increasingly being reused for purposes beyond the direct care of patients. A number of data-sharing initiatives between the National Health Service and external parties have been controversial. A recent example is the 2021 GDPR data-gathering scheme, which was delayed following a backlash from privacy campaigners who expressed concern about consent and transparency issues surrounding the initiative.

In the context of this controversy, this paper will discuss what Fiore-Gartland and Neff (2015) call 'data valences' (or, expectations of data) identified in an in-depth qualitative study. The work explores how the expectations university-based researchers have about patient data influence its circulation towards universities to be reused for research. Critical thematic analysis of interviews with university-based researchers and key stakeholders in the field and relevant documents (data sharing policies and legislation) was conducted, paying attention to how power dynamics play out in five different data journeys explored (Bates et. al., 2016).

Four data valences were found. Actionability, truthiness, and self-evidence were important valences, already identified by Fiore-Gartland and Neff. Vanguard was newly identified in this work; this valence illustrates how people perceive conducting research with patient data as the most innovative way of exploring health issues. University-based researchers have tended to embrace grand promises of big data, because it helps them ensure that data flows with less friction in ways they need. Their expectations about data appear to be aligned with ideas underpinning the agendas of data providers, funders, and policymakers. This alignment of expectations has helped to sustain a growing demand for data which has contributed to driving the flow of patient data towards universities to be reused. However, tensions between the interests and priorities of university-based researchers and stakeholders with financial and material resources, visibility, and decision-making power have the potential of slowing down or blocking the circulation of data.

In-Person Panel BP1 Methodological reflections and approaches (Bremen)

DOCK ONE (chair: Theo Röhle)

- **Ethnographic Interventions. Reflecting on ethnographers' roles in data science projects**, Miriam Fahimi, Nikolaus Poechhacker, Katharina Kinder-Kurlanda

Abstract: Ethnographic research of data power and algorithmic systems has become increasingly important over the last few years (Jaton, 2021; Kinder-Kurlanda, 2014; Mendez Fernandez & Passoth, 2019). And while ethnography can yield important insights into the construction and (re-)production of (data) power (Benjamin, 2019; Crawford, 2021; D'Ignazio & Klein, 2020), it also comes with its own challenges. Based on our work in two data science projects, we reflect on ethnography as a method to research data power. One study was conducted in a credit scoring company, where the ethnographer was mainly involved in two projects on fair and explainable AI. The second study aimed at exploring implementation practices of a public broadcasting recommender system oriented on information diversity. In both studies, our role as researcher was negotiated between those of (ethics and social science) expert, lay person, and project member. The multiplicity of roles also opened up possibilities for knowledge production and intervention: while scholars in critical code studies argue that we should become experts ourselves (e.g., Manovich, 2011), we experienced that being addressed as non-experts allows for methodological intervention. Developers were encouraged to explain and translate tacit assumptions about data and its usage, and thus making explicit hegemonial interpretations of data and what it refers to. In addition, we were able to see not only tacit assumptions and knowledge, but also non-knowledge. I.e., situations in which the developers themselves struggled to interpret the data and to relate it to

an (always already) existing social order and underlying power relations. In our contribution we discuss what these situated interventions can tell us for a general approach to ethnographically researching digital technologies – and about possible forms of intervening in the production and stabilization of data power.

- **Introducing Sphere Transgression Watch: a digital tool that tracks the growing influence of Big Tech in our society**, Marthe Stevens, Bernard van Gastel, Andrew Hoffman, Lotje Siffels, Tamar Sharon

Abstract: Over the past decade, large technology firms such as Google, Apple and Amazon have become increasingly important actors in various domains or spheres of our society, such as health, education, news provision and urban planning. Sphere Transgression Watch is a digital tool that tracks the growing presence of Big Tech across different spheres of society over time.

Sphere Transgression Watch grew out of a collaboration between philosophers, interaction designers, social and computer scientists to visualize and put to work the conceptual framework developed in a research project on the increased influence of Big Tech in health and beyond. The tool has two functions: to act as a public database that records the many initiatives companies undertake in various domains of our society, and to visualize their growing presence in these domains over time. In this way, it seeks both to raise awareness about this phenomenon among the general public in an intuitive way, as well as to spur other scholars to ask research questions with the data made available.

This presentation will present the digital tool and share some of our lessons learned from this collaborative project. We will also reflect on how the process of creating the digital tool itself feeds back into the refinement of conceptual notions used within the wider framework. The tool compelled us for instance, to make particular conceptual ideas more specific (what is and what is not a societal sphere?) and challenged us to visualize our framework in different ways and consider the consequences of those visualizations.

- **Interviewing an Algorithm: Developing a research method for critical inquiry into algorithmic systems from a socio-cultural perspective**, Iris Muis, Mirko Tobias Schäfer, Arthur Vankan, Daan van der Weijden

Abstract: The emerging field of critical data studies is inherently interdisciplinary (e.g., Kitchin & Lauriault 2014; Iliadis & Russo 2016). This is particularly useful for the inquiry of multifaceted issues such as datafication and algorithmization. Recent publications (e.g., Aragona 2022; Crawford 2021; Roberge and Castelle 2021) present ways of inquiring into algorithms. Considering ethics, developer and use contexts are considered essential (Brown et al 2021). The more algorithmic systems are used in corporations and government organisations, the more pressing the need for critical data studies to develop methods for studying these systems in their respective developer and use contexts (e.g., Raji & Buolamwini 2019).

Working with two government safety and regulation authorities, the aim is to conceive means of inspecting algorithms beyond a merely technical audit. Inspired by the practice of appraisal interviews between employer and employee, we design a review process for an algorithm to evaluate how AI and its use affects values. We are working towards a structural process for inquiring developer and use contexts of algorithmic systems, and their ethics. Drawing from cultural analysis and science and technology studies, we develop a method for inquiring algorithmic systems. We situate this effort within practices of government regulation and oversight.

This paper reviews literature on socio-cultural inquiry of algorithmic systems, and –drawing from our empirical research of AI in different societal sectors- provides an initial framework for interrogating algorithms. In conclusion this paper discusses the emerging governance and regulation of AI. Our aim with this paper is twofold: we would like a) to initiate a discussion on empirical methods in critical data studies, with an eye to analysing algorithms, and b) we would like to engage in conversations on how our work as critical data scholars can effectively intervene in shaping the digital society.

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Online Panel OZ4 Data Science: modelling, algorithms, AI and automation (Ottawa)
(chair: Jess Reia)

- **Student Stakeholders and Critical Data Pedagogy: The Imperative of Ethics in Data Science Programs**, Justin Grandinetti

Abstract: In a contemporary landscape in which countless visible and invisible data-driven processes underpin and structure everyday life, it is more important than ever that undergraduate education informs and prepares students for the ethical dilemmas related to data collection, storage, processing, and usage. While critical data literacy is relevant to all students, this training is imperative for students majoring in data science. Often referred to as the “sexiest job of the 21st century” (Davenport and Patil, 2012), data science positions are in high demand, as colleges and universities rush to establish data science majors and training certifications. Most importantly, successful data science graduates will shape the present and future of data-analytics. With such high stakes, it is crucial that data science training includes not only programming and analysis, but also consideration of data inequalities, discrimination, justice, and agency.

In this paper proposal, I discuss my own experience as a critical media studies scholar taking part in interdisciplinary instruction and curriculum design for a large regional public research university’s newly-formed data science program. Scholarship has attended to the data revolution and its consequences (Kitchin, 2014), along with the key considerations of data ethics (Floridi and Taddeo, 2016; Vallor and Rewak, 2018). These accounts are joined by recent work on pedagogical tactics for incorporating ethics into a data science curriculum (Bezuidenhout and Ratti, 2020; Bezuidenhout, Quick, and Shanahan, 2020; Fairfield and Shtein, 2014; Henderson, 2019). Drawing from own experience and reflections, I add to these emergent conversations on teaching data ethics to data science majors, curriculum development with an ethical focus, and assignments that foster critical conversations about data power. Consequently, this presentation addresses the need for interdisciplinary approaches to ethics-driven data education to help guide the next generation of data practitioners and engaged citizens.

- **Artificial Intelligence, Data Exchanges, and “The Biggest Lie on the Internet,”** Jonathan Obar

Abstract: As training data are integrated into development processes for artificial intelligence (AI) services, it is important to ask - to what extent is the data connected to “the biggest lie on the internet”?

“I agree to the terms and conditions” is said to be “the biggest lie on the internet” (Obar & Oeldorf-Hirsch, 2020). Research suggests individuals often ignore terms of service and privacy policies when clicking “agree” during service sign-up in particular (Ibid). The use of manipulative user-interface designs like clickwraps by service providers helps facilitate this circumvention of policy engagement, ensuring users are rushed towards monetized sections of services, limiting education and dissent (Obar & Oeldorf-Hirsch, 2018). This contributes to the possibility that vast data sets

used to train AI are being built without ensuring the meaningful online consent of the data subject, or their detailed understanding of the implications of so-called agreement.

As Crawford (2021) notes, “The AI industry has fostered a kind of ruthless pragmatism, with minimal context, caution, or consent-driven data practices while promoting the idea that the mass harvesting of data is necessary and justified for creating (AI) systems” (p. 95). Indeed, it is challenging enough to address these concerns when a single company collects data from users for its own purposes. More complex are exchanges where data sets are shared between companies, creating additional distance between online consent processes and resulting AI services.

This paper critiques the growing distance between data subjects and AI development processes through a discussion of Amazon’s AWS Data Exchange for Data Providers initiative. In policy and marketing materials, the service claims to provide opportunities for clients to engage with third-party, cloud-based data via providers including Acxiom, Foursquare, and many others. Less clear is the extent to which these organizations are ensuring the meaningful online consent of data subjects, especially as data is shared beyond the original context of collection. If we are to move from “known” to “knowing publics” (Kennedy & Moss, 2015) in the data mining context, emerging data exchanges must ensure opportunities for individual oversight, and work to address the “biggest lie on the internet”.

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- **Epistemological problems of data power in risk management processes**, Sucheta Lahiri, Jasmina Tacheva, Jeff Saltz

Abstract: In this qualitative study through semi-structured interviews with data scientists, we examine the epistemological problems of data science risk management practices in North American private and government organizations. The pernicious effects of racial bias in healthcare systems [1], recruitment biases in jobs [2], skewed predictive policing and gender stereotyping [3] motivate critical data studies [4] scholars in this study to question the accountability of risk assessment instruments (RAI) [5] (such as gold standard benchmark, checklist) and risk management frameworks in data science practices. The initial observations through interviews with data scientists draw attention to the challenges of data centrism, right skillset, institutional barriers, and a lack of risk management framework for data science. Ethical dilemma arising through institutional power structure poses concerns over genealogy of data. During the inductive analysis, unavailability of women data scientists in the interview emerging as a theme questions the disproportionality of gender with race and disability status. Grappling with Haraway’s questions on ‘how to see?’ and ‘where to see from?’ [6] urges the authors with intersectional identities to ‘see from below’ [6] and reorient intersubjectivities in the knowledge production [7]. The overall aim of this study and future work remains three-fold. First, we develop ethical guidelines for data scientists that are informed by feminist ‘situated-ethics’ and praxis [8]. Second, we create a prototype of a standard risk management process that may be integrated with aforementioned ethical guidelines. And third, we understand the politics of cartographies with global risk management framework deployed in local regions. To study the questions associated with above vision, authors expand their study and account for perspectives of ethical practices shared by data scientists from diverse race, ethnicities, and disability status. Next, they take a bottom-up approach to ascertain situated practices of risk management driven by epistemologies of data.

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Online Panel SZ5 Metaphors and historical perspectives to make sense of the data & platform economy: a critical approach ([Sheffield](#))
(Chair: Benedetta Brevini)

- **From tech giants to digital lords: the promise (or tragedy) of the digital feudalism framework**, Benedetta Brevini
- **Back to the medieval village – digital pillories and witch hunts as tools for social control**, Jakob Linnaa Jensen
- **Technocolonialism: extraction, experimentality and discrimination in 'states of emergency'**, Mirca Madianou, Goldsmiths, University of London
- **The decolonial turn in data studies**, Nick Couldry, London School of Economics and Political Science, UK

Abstract: The data economy challenges existing economic systems, social interactions and participation as well as the very foundation of democracy. As data is replacing labor as the central economic good in the so-called platform economy, society, class structures and democracy might change fundamentally. The panel's speakers employ different historical perspectives and metaphors on the platform economy but focus mainly on two periods: the middle ages and colonialism. Both periods were characterized by a strong correlation between a certain economic system and the exercise of political power. Structured inequalities in systems of labor, trade and distribution of wealth had significant consequences for the distribution and (re)production of political power. The speakers argue that similar conditions can be found in the platform economy. Paper 1 takes the point of departure in the Middle Ages and demonstrates how technology platforms operate on principles similar to the feudalist structures of medieval society. Amazon, for instance, uses a dominant position to suppress competition by controlling by design which particular products users see and by favouring their own brands over third-party suppliers. Paper 2 takes the medieval perspective a bit further. By using the Medieval village as a metaphor for social life he demonstrates how platform power is not only exercised by greedy tech giants but by citizens themselves. Social life in the platform economy is often based on mutual surveillance and strong logics of social control. "Virtual pillories" and "digital witch hunts" are mechanisms by which the masses control each other, narrowing free speech and individual agency. Paper 3 moves to the colonialism perspective and discuss how contemporary forms of data extraction are best understood by seeing it as a genuinely new stage of colonialism which is based around the appropriation not (as in historic colonialism) of land, its resources and the bodies to work those

resources, but the flow of human life itself, made valuable in the form of data. In the final paper 4, it is emphasized how colonialism still is at play, now as technocolonialism, understood as the ways by which digital innovation and data practices revitalise colonial legacies in the humanitarian and international development sectors. The panel is based on several recent books written by the panel participants. By bringing together our ideas and perspectives we hope to generate a stimulating discussion and contribute to a unified research agenda of historically focused analyses of the platform economy and beyond.

Keynote

Arts Tower LT1 (chair: Jo Bates)

Time:	Ottawa 10:30-12:00	Sheffield 15:30-17:00	Bremen 16:30-18:00
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SHEFFIELD KEYNOTE: Leave to Remain: The Biopower of Migration Algorithms and Data Structures, Irene Fubara-Manuel

Abstract: Contemporary visa regimes rely on data from migrants, which are then structured and processed through a set of algorithms that determine levels of access and mobility. In their reproductive function to create and govern data subjects, such systems have power over life. They exclude and permit bodies through the border—leave (permission) to enter or leave to remain and so on. This keynote uses the UK's visa regime as a starting point to explore the algorithmic cultures of bordering through which the UK government polices its national boundaries. It delves into the archive of the UK visa regime to trace the production of racialised data subjects. Connecting this archive to contemporary data and algorithmic practices, it asks what reclamation of life and subjecthood are possible when problematizing these archives? What legacies and data ghosts exist in the current visa regime? Borrowing the method of critical fabulation from Saidiya Hartman, this keynote interrogates how migrant algorithmic imaginaries might stress the limits of the archive and unsettle the current biopolitical regimes of migration. It centres migrant algorithmic imaginaries in the production of alternate visions and futures of the border.

Session IV

Time:	Ottawa 12:15-13:45	Sheffield 17:15-18:45	Bremen 18:15-19:45
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In-Person Panel BP2 Engagements with Concepts in Data Studies (Bremen)

DOCK ONE (chair: Nikolaus Pöchhacker)

- **Understanding data studies: a conceptual and methodological inquiry into research on datafication**, Irina Zakharova

Abstract: Data power and how it is enacted in datafication processes of “translating everything under the sun in a data format” (van Dijck 2017) is a key concern of the interdisciplinary field of data studies. In this field, multiple concepts about datafication are produced relevant for understanding the power of data. These concepts are grounded in various disciplinary, theoretical, epistemological, and methodological approaches to studying datafication. As Haraway (2016) reminds us, however, “[i]t matters what matters we use to think other matters with” (p.12). In relation to data studies, it means that a conceptual and methodological reflection of the field is needed.

My contribution aims to provide such a reflection. This paper expands on the methodological debates of the double social lives of methods (Ruppert et al. 2013) and the concept of methods' performativity (Barad 2007) by applying the notion of methods assemblage (Law 2004)—human and non-human elements of research process held together through research practices.

I report results of a quantitative and qualitative literature analysis of 51 empirical research articles about datafication in social sciences published between 2015-2019 and of expert interviews with 32 datafication scholars at different career stages. I inductively develop three methods assemblages applied in data studies. These methods assemblages are distinctive in relation to what 'datafication' means empirically, kinds of knowledges sought by researchers applying them,

extent of collectivity of addressed actors, and these actors' positioning in datafication processes between the poles of data use/production. These methods assemblages can be applied for 1) exploring encounters with data representations, 2) tracing dynamics of data movement, and 3) reconstructing datafied regimes.

I argue that these methods assemblages allow a methodological and conceptual mapping of the field of data studies and provide it with additional vocabulary sensitive to ontological multiplicities (Mol 2002) and data powers of datafication processes.

- **Sphere Transgressions: reflecting on Big Tech's growing influence on our society,**
Tamar Sharon, Lotje Siffels, Marthe Stevens, Andrew Hoffman,

Abstract: The datafication of more processes in our society has made it possible for large technology firms to gain considerable influence into more spheres of our society, including health, education and news provision. Think, for instance, about the Google/Apple API that laid the basis for many COVID-19 contract-tracing apps worldwide or biomedical researchers that increasingly rely on data infrastructures developed by these companies.

Much of the existing critical scholarship analyzing Big Tech's growing societal influence tends to frame the risks involved in one of two ways: either as a matter of privacy and data protection, or as the overflows that accompany growing commodification of (personal) data. While both approaches are doubtless important in understanding the stakes of datafication, they do not exhaust all considerations that must be taken into account for rendering an accurate diagnosis of the digitalization of society writ large. This presentation outlines a novel conceptual framework, drawing on philosopher Michael Walzer's Theory of Justice (1983), that further enriches the study of Big Tech's increasing societal enmeshment.

Of particular importance to this framework is Walzer's argument that social life is made up of different spheres (for example, the market and politics), each with its own distributive logic and conception of justice. In a just society, advantages in one sphere – such as wealth or political power – should not translate into advantages in another. Such translations consist in what Walzer calls “sphere transgressions” that are foundational to unjust and tyrannical societies. We argue that we are currently witnessing a series of sphere transgressions by tech companies, whereby the (legitimate) advantages they have accrued in the sphere of digital goods are translated into (illegitimate) advantages in other spheres. This insight allows us to provide a richer normative analysis of how to deal with these transgressions and recognize the sphere-specific values at stake.

- **Deliberate Data: A Critical Approach to Urban Data Collection for Visualization Practitioners,** Francesca Morini, Tobias Kauer, Benjamin Bach, Marian Dörk

Abstract: We present a pragmatic framework for critical collection of urban data, built around four actionable tactics. For the past decade, literature on data activism has been documenting novel forms of critical practices that bring to the surface the situated, constructed, and political nature of data. However, while these research efforts span several domains, there is limited experience with considerate data collection for the purpose of visualization. With this work, we reflect on data collection for information visualization as a critical practice that calls for deliberation and careful scrutiny. We do so by reporting on two case studies focused on urban topics: perception of public life in a specific neighborhood and manifestations of temporal patterns of a particular city square. For each case study, we reflect on the applied data collection pipelines and document the surfacing of potentially novel strategies to address the phase typically preceding the visualization work. As a result, we develop the concept of deliberate data and derive four actionable tactics for urban data collection: hotspotting, humanizing distant data, street level collection, and participatory data correction. These tactics originate from a combination of existing data collection methods classified according to where (distant or situated) and how (quantitative or qualitative) data can be collected. The individual methods are grouped into clusters and distilled into tactics that may be applied and adapted for critical data collection in other contexts. With this contribution, we embrace the inherently constructed nature of data and challenge visualization practitioners and researchers to approach the initial stage of the visualization pipeline deliberately.

Online Panel BZ6 Data, place and space (Bremen)
(chair: Yana Boeva)

- **Taking a Critical Look at the Critical Turn in Data Science: From Data Feminism to Transnational Feminist Data Science**, Jasmina Tacheva, Sucheta Lahiri

Abstract: The latest revelations about the atrocities perpetrated by data power purveyors such as Facebook have only accelerated the already burgeoning fields of data justice and critical data studies. While the critical turn in data science with its focus on feminist, queer, Indigenous, and critical race theory perspectives is undoubtedly a move in the right direction, we ask, “Do critiques of data science need to be held up to scrutiny as well?” This is not a rhetorical question, since despite the much-needed reorientation to justice the critical turn in the field has afforded us, thereby enabling society to understand the full scope of power wielded by data and algorithms deployed at a massive scale, the ways in which these realizations have been articulated in both theory and practice have, unbeknownst to the authors of these critiques, upheld divides the praxis of social justice has warned us against. Perhaps the greatest such divide is the false dichotomy of “the West and the Rest,” since even the most preeminent proponents of the critical turn, although acknowledging the need to look at non-Western contexts, have articulated that their work is focused solely on the Global North, and on North America in particular.[1] Instead, we propose a transnational feminist analysis of data science, with the two-fold goal of: (1) reading mainstream critical data projects transnationally and pointing to several conceptual blind spots which limit the authors’ stated aims, and (2) underscoring the importance, and indeed – the need, of a transnational feminist intervention in data science given the global impact of algorithms and their ubiquity and transferability.

[1] See for example the introductory chapters of Kate Crawford’s (2021) *Atlas of AI* and Catherine D’Ignazio and Lauren Klein’s (2020) *Data Feminism*

- **Public security devices and datafication in the city of São Paulo**, Iara Schiavi, Sérgio Silveira

Abstract: This article aims to develop how datafication, understood here as the conversion of life flows into data flows (VAN DIJCK, 2014), is reflected in urban processes related to public safety in the city of São Paulo. The growing use of data in the security area reveals how massive data extraction has been used to maintain unequal power relations and lack of public involvement in the decision-making process regarding the incorporation of technologies and the collection, treatment, and use of data. Thus, the aim is to map how the incorporation of these public security technologies was carried out by the City Hall of São Paulo between the period between 2017 and 2020 to understand aspects such as popular participation in the decision-making sphere, the use of citizen data by the government and the role of private companies in this transformation. To this end, it surveyed datafied devices through the official communication channels of the City Hall, which resulted in five security technologies based on data extraction (City Cameras, Body Cam, SP+SEGURA, Dronepol, and Compstat Paulistano). The incorporation process and the technologies themselves will be analyzed here following assumptions of the critical theory of datafication, which includes aspects such as social alienation regarding the adoption of these solutions and a massive collection to enable purposes of social surveillance by the State and technology companies. It is concluded that such incorporation in the City Hall of São Paulo reaffirms discriminatory processes against already marginalized populations and excludes the interested population from the decision-making stages, reaffirming an authoritarian posture on the part of the State, especially concerning security areas.

- **An updated discussion of ‘Public Participation Geographical Information System’ (PPGIS): The Power of Crime Data for Marginalized Communities**, Andrea Adams, Elsa Marie D’Silva

Abstract: The power of location data is well known, but its power is vested in those who control it. Much of geolocation data in neighborhoods and countries are gathered and provided by government sources as a part of open government initiatives (Johnson et al., 2017). However, location data is often controlled by private sector ecosystem brokers that control individuals, vendors, and communities’ ability to utilize and contribute information about locations (Daggitt et

al., 2016). Even if communities contribute to the data, the ability of individuals or neighborhood groups to exert agency over data characterizations of their neighborhood is related to the aforementioned data access points, (Kar et al., 2016) and is often limited by residents' digital literacy (Woo and Law, 2021). Additionally, some location data, like crime hotspots, cast negative characterizations about neighborhood locations which are difficult to modify (Drewelies et al., 2020). However, Sieber's (2006) seminal article recognized public participation geographic information systems (P/PGIS) as a system of crowdsourcing that could be used by marginalized groups and communities to engage in social change (Dunlop et al., 2021), or to expand public perceptions of neighborhoods (Solymosi, et. al, 2018). This might be critical in instances where reported crime-related data is the main source of community characterization (Kedia, 2016). Moreover, the emerging use of "place" as a level of analysis for crime creates an opportunity for individuals in communities to address location-based problems that exist, but only when they are empowered by community-level data (see Hoffman et al., 2018). The study will review the literature on community empowerment (Coy et al., 2021), revisit/update P/PGIS crowdsourcing methodology (see Kar et al., 2016), and use the Safecity app's (<https://www.safecity.in>) crowdsourced data as a model to understand whether crowdsourced crime location data or hotspot data support community empowerment.

Online Panel OZ7 Data in everyday life (Ottawa)
(chair: Margaret MacAulay)

- **Tracing Dynamics of Power in the Datafication of Later Life**, Nicole Dalmer

Abstract: Digital technologies are increasingly central to the planning of aging futures. Indeed, future imaginaries of older age are already shifting from traditional health-based models of 'active' and 'successful' ageing to elite visions of a technology-centred lifecourse. Innovations in the AgeTech sector are created and marketed as ways for older adults to foster their independence, autonomy, and enhanced health while simultaneously promising a reduction in the social costs of eldercare. These optimistic perspectives have been found, however, to obscure the labour issues, ageist biases, and social inequalities that are implicated in the design and use of technological interventions.

This paper is in response to this broader technological turn in gerontological culture and emphasizes a need for research that critiques the relationships between austerity-driven health regimes for older people and the systems of care, spaces and human-machine infrastructures they configure and endorse. Drawing on feminist technoscience, critical gerontology, socio-gerontechnology, and sociology of the body, we propose a critical, theoretical framework for exploring the dynamics of power related to the technological tracking, measuring, and managing of ageing bodies. In particular, we introduce three dimensions of power relations that are enmeshed in the designs, operations, scripts, data, and materialities of technological innovations: a) ageing bodies and the power of numbers, b) ageing spaces and the power of surveillance, and c) care economies and gendered power relations. Conclusions consider the importance to age studies of understanding how often unacknowledged powers associated with the datafication of ageing and care are complexly embodied, gendered and socio-technical.

- **Data justice through (dis)engagement in information services for crises response**, Jorge Rojas-Alvarez, Danielle Chynoweth, Lynn Canfield, Anita Say Chan

Abstract: This paper defines data responsibility in resource directories for human crises based in a co-design project in a community partnership in the Champaign County (IL, USA). Data responsibility interrogated accuracy and claimed accountability of the data presented in a public information service. The project questioned the current human crises approach, moving from a problem of access to information to a collaborative exercise between the members of the ecology of social services in Champaign County. The community partnership reflected on data justice as a form of (dis)engagement in the collection, analysis, and use of data in communities seeking to build bottom-up information infrastructures (Taylor 2017; Dencik et al. 2019; Heeks and Renken 2018). The project team applied participatory design (Costanza-Chock 2020) and Patchwork Prototyping (Jones, Floyd, and Twidale 2007) to engage the community in the design of new

features and get feedback based on actual use of an information service. Information and referral (I&R) organizations for human services in the US offer data and expert advice on crisis response to communities. These organizations collect, classify, and publish data about services providers to overcome individual's crises (e. g., financial stress, job loss, homelessness). I&R organizations employ referral specialists to attend clients in their call centers. They also rely on web-based information services, mobile apps with directories and text message-based services. I&R organizations face critiques on data responsibility and lack of participation of communities to maintain and improve the directories published. Additionally, data for crisis and capacities development for individuals to overcome crisis have been disconnected. Community workshops and prototype testing demonstrated specific needs on how expand the information service from a conventional directory of services to a community of care between social service agencies, participants, services, and community resources.

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- **Coffee Roasters' Data Vernacular: On the Entanglement of Digital Data and Craft**, Karin van Es

Abstract: Contemporary debates about digital data are structured by a set of assumptions and key concepts – what we will call “data discourse” – that enable the voicing of different opinions within a shared framework. One conspicuous example for such widely shared assumptions is the symbolic opposition between data / datafication and human perception or reasoning (e.g. (Thylstrup et al. 2020)). This talk demonstrates that contemporary data discourse is far from homogeneous by exploring a specific instance of data power in action. More concretely, it takes the use of computerized data in specialty coffee roasting as an example for - what we call - “data vernacular” that reproduces, uses, but also modifies elements of the dominant data discourse. Like “vernacular photographs” (Batchen 2000) or “vernacular creativity” (Burgess 2007), the more idiosyncratic and rather local manners of using data, at least in public perception, get often overshadowed by the strongly formalized and institutionalized applications. To understand coffee roastings’ specific contribution to, and inflection of a wider data discourse, we base our analysis on semi-structured in-depth interviews with nine coffee roasters at five different sites in Amsterdam and observations of their coffee roasting process. Additionally, we explore the broader context within which their situated data practices took shape, by examining homepages of roasters and the coffee roasting handbooks by Scott Rao (2014) and Rob Hoos (2015) that are recurrent reference points in the field. This reveals that while data’s promise of efficiency and consistency is taken up in coffee roasting, the data are embedded in the context of a craft whose insistence on the superiority of human senses actively constraints the impact of data. These vernacular uses and meanings of data are of interest for how they emerge from and position themselves within the broader “problematizations” (Foucault 1997) characterizing contemporary data culture.

Day 2 - Bremen

Thursday June 23

Welcome

DOCK ONE(Juliane Jarke)

Time:	Ottawa 2:55-3:00	Sheffield 7:55-8:00	Bremen 8:55-9:00
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Session V

Time:	Ottawa 3:00-4:25	Sheffield 8:00-9:25	Bremen 9:00-10:25
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In-Person Panel BP3 Discourses about Data Power (Bremen)

DOCK One (chair: Signe Sophus Lai)

- **The News Framing of Artificial Intelligence**, Dennis Nguyen

Abstract: News reporting on artificial intelligence (A.I.) and big data plays an important role in shaping public perception of technological trends (Bunz and Braghieri, 2021; Paganoni, 2019; Pentzold et al., 2019). Media narratives about technology can create awareness for the profound transformative effects of novel technologies and the social, economic, and political stakes involved. This concerns critical questions about the definition of values, benefits, and risks associated with data-driven technologies. Analysing how news media portray A.I. reveals what interpretative frameworks circulate in public discourses and who “gets to speak” about datafication and automation. This, in turn, allows for tracing relationships of power in tech discourses. To this end, the present study charts A.I. media frames in five internationally renowned news outlets with a focus on technology: The New York Times, The Guardian, Wired, Washington Post, and Gizmodo. The main goal is to identify 1) dominant emphasis frames in A.I. news reporting over the past decade, 2) benefits and risks associated with A.I., and 3) organisations and experts who frequently contribute to A.I. media discourses. An automated content analysis served for inductive frame detection (N=4130), charting risk references, while a network analysis revealed frequent social entities in the news texts (via Named Entity Recognition). The results show how A.I.’s ubiquity emerged rapidly in the mid-2010s and that the news discourse became more critical as well as political over time. Furthermore, a relatively static spectrum of economic, political, and media elites dominate A.I. discourses, although there are indicators for a tentative increase of diversity in recent years. Nevertheless, news outlets could provide social groups affected by A.I. as well as actors from civil society with more visibility. Finally, it is argued that A.I. news reporting forms an important part in building critical data literacy among lay audiences by making tech discourses more transparent.

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- **Consider the Blackbox: Transparency as Value and Burden in Municipal Data Projects**, Lisa de Graaf, Iris Muis, Mirko Tobias Schäfer

Abstract: Government institutions increasingly make use of innovative technologies like algorithms to make their processes and services more efficient and effective. The emergence of data practices and the application of algorithms for decision-making in public management have led to growing critical commentary (e.g., Pasquale, 2015; O'Neil, 2016; Eubanks, 2018; Dencik et al., 2019). However, there is yet insight to gain from in-depth investigation of data practices in different local contexts (Loukissas, 2019). Over the past years we have developed a research method that enables researchers to enter organisations as experts on data ethics (Franzke et al., 2021). Conducting impact assessments of data and AI projects with our Data Ethics Decision Aid (DEDA) facilitates privileged insight into the data practices of local governments, and their ethical considerations regarding these practices (Siffels et al., 2022). This provides a much-needed look at the data practices in government organisations, and how these organisations respond to ethical challenges. Drawing from five years of experience and 80 DEDA sessions, this paper carves out the discourse on transparency of data and AI projects. We discursively analyse three recurrent themes concerning transparency in data projects. First, friction and knowledge gaps between the bureaucrats and the city council. Secondly, growing awareness of and concern about Freedom of Information Act requests by citizens and the media. Third, the tension between transparency as a public value and the 'wobble-room' that is needed to experiment with data and technologies in so-called 'living labs', in which complete transparency can hinder the experimental nature of the living lab.

Our participatory and ethnographic observations lay bare the power relations of governmental data practices. It shows the dynamics between calls for transparency by the media and individual citizens on the one hand, and the tensions surrounding transparency within governmental organizations on the other. Our in-depth perspective shows how these organisations grapple with ethics, and which applicable responses they develop in literacy development, organisational structures, and policy changes. Our research practice contributes to building a digital society where power asymmetries can be balanced, and data practices and algorithms be held accountable.

- **Infrastructures of data power: Revisiting the Twitter debate on data centers in the Netherlands**, Karin van Es, Jeroen Bakker, Daan van der Weijden

Abstract: An essential aspect to data power are its actual infrastructures, the physical spaces where intangible data are stored and processed. The increasingly data-heavy applications of social media and data analysis platforms require large data centers. As the self-described "gateway to Europe," the Netherlands is Europe's leading internet hub, with over 180 data centers. These structures, which are built among others by the big tech companies, are focal points of societal debates. Here topics such as their impact on (green) energy consumption, the physical space they take up in a densely populated country, and the secretiveness in decision-making processes concerning their settlement are points of contention (Bakker et al. 2021). Rather than zooming-in on a particular data center and their impact on local conditions (e.g., Gilmore and Toutman 2020; Jakobsson and Stiernstedt 2012; Mayer 2019; Velkova 2019), this paper analyzes the broader public debate around data centers in the period 2020-2022 in the Dutch Twittersphere. More specifically it is interested in: How have data centers been imagined and represented by different publics over time? Twitter is a relevant platform for this public debate in that it connects voices from policy makers, journalists and experts with media coverage in newspapers and television. Through a variety of computational methods (incl. text, image, and network analysis) and close readings of communities and tweets, we gain insight into the topics, arguments, dynamics and actors and stakeholders of the debate on Twitter. The findings show an interesting tension between local and (inter)national concerns, the continued relevance of traditional media on public debate, but also how diverse and multifaceted imaginaries about data centers both articulate and inflect on the broader discourse. This paper adds a relevant perspective to data power, as it unravels the multifaceted discourse connected to the physical infrastructure of "big data".

Online Panel BZ8 Data, place and space (Bremen)
(chair: Stine Lomborg)

- **“Critical Turn” in Geomatics and Geospatial Information Systems: An Epistemologically Sound Foundation for Sustainable Development Goals**, Stefano Calzati

Abstract: By now, data are considered as a key asset for monitoring and achieving the United Nations’ (2015) Sustainable Development Goals (SDGs). More precisely, it is geospatial data and Geospatial Information Systems (GISs) to be considered pivotal for this task (Scott and Rajabifard 2017): on the one hand, geomatics is the discipline endowed with the goal to provide a “systemic, multidisciplinary, integrated approach to selecting the instruments and the appropriate techniques for collecting, storing, integrating, modeling, analyzing, retrieving at will, transforming, displaying, and distributing spatially georeferenced data” (Gomarasca 2010, 137); on the other hand, GISs are regarded as “the powerful combination of instruments capable of receiving, recording, recalling, transforming, representing, and processing georeferenced spatial data” (Gomarasca 2017, 138). Still today, however, geomatics and GISs rest on thin epistemological foundations, especially concerning 1) the nature and role of information and data, as well as 2) the impact these can have on initiatives pursuing sustainable development.

This article builds a bridge between geomatics and GISs, on the one hand, and critical data studies (Dencik, Hintz and Cable 2016; Kitchin 2014; 2017) on the other hand, aiming to inform the former with insight from the latter. The goal is to show why a critical turn in geomatics and GIS is necessary and can fruitfully contribute to sustainable development studies, notably 1) by debunking the (assumed) isomorphism between information and data, which is at the basis of both geomatics and GISs; 2) by recognizing and operationalizing data’s socio-technical nature.

In the second part of the article, such discussion is applied to the Integrated Geospatial Information Framework (IGIF), developed by the Committee of Experts on Global Geospatial Information Management of the United Nations (UN-GGIM 2020). The article shows that the IGIF presents the same epistemological limitations at the basis of geomatics and GISs. In fact, the IGIF adheres to a reductionist “Lego model” approach to the tackling of SDGs, which overlooks the tensions affecting the convergence of technologies and social practices for the collection and use of geospatial data. A critical perspective on this helps not only to highlight the limits of IGIF’s approach, but also make the framework epistemologically more robust and really propaedeutic to the monitoring and achievement of SDGs.

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- **Beyond the scorecard diplomacy: From soft power rankings to critical inductive geography**, Natalia Grincheva

Abstract: My presentation will interrogate if data visualization, despite its inherited subjectivity, can be used not only as a tool for data representation, but as a research platform to facilitate an iterative exploratory process to identify new themes, raise new questions, and generate new knowledge. It will address this task by pursuing a twofold research goal. On the one hand, it will confirm previous findings that have documented the political power of data visualization specifically in the field of scorecard diplomacy. In this regard, it will critically discuss Portland Soft Power 30 Index that measures soft power of selected countries on the annual basis to reveal how the scorecard diplomacy works through the ranking dashboard. On the other hand, my presentation will reflect on the experience of designing a geo-visualization system that, by contrast, intended to overcome shortcomings of data visualization's politics to build a platform for inductive academic research. It will first discuss a pilot award-winning research project "Deep Mapping: Creating a Dynamic Web Application Museum Soft Power Map" completed in 2019, which addressed several critical problems of Portland's measurements. It will then move forward to share how this research creation project was mostly recently advanced through a new critical digital practice of building a new Data to Power prototype. The new solution aims to employ the power of Open Data to help institutions to tell meaningful stories about their international engagements and impacts.

- **Building Information Data Power: Sociotechnical Implications of Automated Space Production**, Yana Boeva, Kathrin Braun, Cordula Kropp

Abstract: In our data-driven societies, new forms of digitally mediated space production are starting to shape our built environments and the sociotechnical practices involved in their creation. The architecture and construction sector has been relatively impervious to adopt digital technologies and computation. The production of buildings and space is considered fragmented and relies on multiple, often disconnected, and even analog sources of information and data. However, recent technological and political-economic changes such as building information modeling (BIM), platform and cloud technologies, and AI-powered design automation promise to deliver 'better' and 'faster' data-based designs of buildings and spaces. The emergence of a new era of digital production of space, driven by the regime of data-based optimization and efficiency (Powell 2021), is mainly shaped by design software providers like Autodesk, technology companies like Alphabet, and governmental support.

Under these conditions, we contend, a variant of platform capitalism based on building data from architecture and construction begins to reconfigure not only the actions of citizens but also the socio-material reality of buildings and places we live in. Debates on data's presence in our societies have explored citizens' use of mobile devices, digital activities, and preferences. While research on smart cities has shown the implications of user-generated data for urban governance and services (e.g., Kitchin 2014; Mattern 2017), the production of building information, data, technology companies' involvement, and the consequences for our built environments require further attention. In this paper, we outline the role of building data, platformization, and platform capitalism, empowered by technology providers and enabled through government policies, in reconfiguring actor and power relations in architecture and construction. We draw on an empirical study of the digitalization of architecture and construction through BIM.

Session VI

Time:	Ottawa 4:40-6:05	Sheffield 9:40-11:05	Bremen 10:40-12:05
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In-Person Panel BP4 Calls for interventions (Bremen)

DOCK One (chair: Dennis Nguyen)

- **Democratic control over Data and AI Projects in the Local Public Sector**, Elise Renkema, Iris Muis, Mirko Tobias Schäfer, David van den Berg,

Abstract: Dutch governmental organisations increasingly make use of digital technologies, such as algorithms (Meijer and Grimmelikhuijsen, 2021). A key issue in this development is that there is a lack of democratic control by the legislative bodies of government (Passchier, 2020; Meijer, Grimmelikhuijsen and Bovens, 2021). Especially municipal council members are not sufficiently equipped to critically assess data and AI projects that are deployed by municipalities (Rathenau Instituut, 2020). However, a lack of technological knowledge should not prevent politicians from debating the societal impact of digitalisation.

We present different perspectives on supporting council members in providing democratic control over data and AI projects in public management. Our findings present different interventions: from educative formats, such as lectures and trainings, to instruments such as our “Digital Adviser”. We draw from several years of working with municipalities within a joint research project of Utrecht University’s departments of public administration, critical data studies and several municipalities and provinces in the Netherlands. Our overall goal is to address the lack of democratic control and therefore legitimacy over government decisions regarding digitalisation. This paper reports our initial findings and experiences with interventions in the field of datafication and algorithmization of policy making and the role of elective representatives within this trend.

We argue for an empirically driven and socially engaged practice of critical data studies, covering local contexts of data practices. This provides in-depth insight into the discourses of data power, facilitating effective knowledge transfer and social engagement for building a fair and open digital society.

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- **Exposing Data Power: Secrecy, Revelation, and Outrage in Whistleblowing Scandals**, Christian Pentzold, Charlotte Knorr, Margitta Wolter

Abstract: Datafication is difficult to understand. Next to the intricacies of computational mechanisms and algorithmic decisions, data-driven ventures are shielded from public scrutiny by legal declarations and corporate fences. Arguably, the power of data-based operations predicates on the staunchly defended secrecy of their inner workings. In this situation, whistleblowers have been key to expose the clandestine business but their contribution has not yet received much critical attention.

In our talk, we unpack data scandals triggered by professionals gutted about their former trade

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who seek to unshroud the objectionable practices of mass surveillance, disinformation, and microtargeting. We zoom in on pivotal instances of publics coming to terms with data power and propose to understand these highly mediated events as beacons of civic outrage that also serve as stages for self-promotion. Hence, in line with recent writings on whistleblower celebrities (Di Salvo & Negro, 2016; Moretti, 2014), the politics of authenticity (Banet-Weiser, 2012), and the management of transparency (Flyverbom, 2019), we are particularly interested in the way, the high-profile renegades provide a personal story of intimate involvement followed by profound conversion which unveils the data-driven schemes and their far-reaching implications. What are the discursive strategies through which whistleblowers tell their experiences? How do they impart the minutiae of data-based operations and what kind of conclusions to they draw from their reports?

Along these questions, we examine three autobiographies: Edward Snowden's *Permanent Record* (2019), Christopher Wylie's *Mindf*ck* (2019), and Brittany Kaiser's *Targeted* (2019) in accord with critical discourse analysis. We argue that data scandals are not moments of public reckoning where the inner workings of datafication are revealed. Unable to provide full transparency, the contribution of whistleblowers lies elsewhere, namely with anchoring the vaporous talk of data power in a plot populated by villainous experts, ruthless politicians, courageous comrades, and unaware citizens. Data power is thus given a face, a face to loath.

- **Analysing Data Power through Participatory Observation: A Call to Action**, Theo Röhle, Petter Falk, Iris Muis, Mirko Tobias Schäfer

Abstract: Critical Data Studies is a quickly emerging field deconstructing the narratives of objectivity of data and questioning the power asymmetries which are constituted in data practices and algorithmic systems (Danaher et al., 2017; Ebers & Cantero Gamito, 2021, Ruppert et al., 2017). A core concern of these debates is how democracy and our agency as citizens is affected by the increasing algorithmisation of everyday life. However, these questions are mostly being discussed based on a limited number of cases, often drawn from US American and "big tech" contexts.

This paper provides a different perspective on data power discourses, by focusing on developers and policy makers deliberating about the implementation of algorithmic systems for public management purposes. Using the Data Ethics Decision Aid, an impact assessment tool for data and AI projects developed at the Utrecht Data School (Franzke, Muis, Schäfer 2021), we have accommodated workshops in government and regional public sector settings. Having extensive experience with this method (Siffels, Van den Berg, Schäfer, Muis 2021), the Utrecht Data School recently partnered with teams in Germany and Sweden in order to facilitate participatory observation across national contexts.

Our findings so far contrast some of the dominant narratives emphasized in the current Critical Data Studies literature; we witness how organizations grapple with questions of data ethics and how they actively respond to challenges, e.g., by implementing checks and balances, constituting accountability and by developing data literacy. Our insights do not indicate a large presence of big tech companies but rather small and medium companies, and also university affiliated developers and researchers. Most importantly, participatory observation allows us to trace the various actors that drive the discourses on data and power within these organisations. In this sense, the presentation is a call for joint action, and to implement the approach in more countries.

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Online Panel SZ9 Platforms and apps (Sheffield)
(chair: Monika Halkort)

- **The Strength of inconvenience: The German Corona-Warn-App and Luca-App as to two pathways to data governance**, Karoline Krenn

Abstract: Civil society involvement in technology design processes is often considered as demanding and inconvenient. As I will argue, it makes a critical difference regarding wide-ranging design decisions. This will be demonstrated by comparing two major Corona contact tracing apps used in Germany: the Corona-Warn-App and the Luca-App. Both differ in their technological design process as well as in their solutions for data collection and management. The CWA was developed and assessed by civil volunteers from different fields supported by the federal government before a public-private consortium took the lead. By its decentralized anonymity providing architecture it offers a data-non-invasive solution. The LUCA-App was developed by a start-up and offered a first solution to digital event registration to German federal states. It is based on a centralized cloud storage and requires the provision of personal information.

I will explore these different pathways and discuss external factors relevant for the outcome within these contingent decision-making processes, such as a narrow time frame to address a critical threat. As I will argue, the outcome of technology assessment varies with the actors involved. And this particularly counts for the evaluation of data collection and management and the risk attributed to the potential of re-purposing data. Not only the recent involvement of the LUCA-App in a scandal about the unlawful use of data for criminal prosecution shows the vulnerability of data-invasive contact tracing. The potential of re-purposing of data generally exposes a key goal-conflict between the need of immediate response to crisis and risks of long-term deployment of data, for example for commercial use. Finally, this examples also highlights the importance of finding a balance between the public value gained through assistance systems and the inner logic of data-driven industry.

- **Decentralisation and Neoliberalisation: Artist-Audience Interaction in the Blockchain-Based Music Streaming Platform Audius**, Mick Vierbergen

Abstract: This paper examines how the blockchain-based music streaming platform Audius offers a decentralised alternative to centralised platforms like Spotify, taking the practice of releasing a single on Audius as the object of research. The main research inquiry is how Audius mediates the interaction between artist and audience. While it shows that blockchain technology offers new and creative ways of interaction, this paper argues that 'decentralisation' reproduces existing inequalities and thrives on a neoliberal ideology that imposes a financial logic in everyday musicking practices. This paper identifies two neoliberal tendencies in particular: the tokenisation of governance and the financialization of fandom.

Following Nelson's model for Practice as Research (PaR), this study consists of a research project that gathers practical knowledge through the release, and a complementary writing which reflects on the practice and places it within an artistic and academic context. The research project is documented through screenshots and the streamable single on Audius and is a collaboration with friend and fellow musician Calvin Rodgers.

This research builds on José van Dijck's model to analyse platforms as ""techno-cultural constructs"" and ""socioeconomic structures,"" drawing on Actor-Network-Theory and Political Economy (The Culture 28). The concepts of 'user/usage,' 'technology,' and 'content' guide my practice, while I reflect on the 'ownership,' 'business model,' and 'governance' of the platform. Using the practical approach of the 'walkthrough method' by Light et al., I guide the reader through the practice of releasing a single on Audius, taking special consideration of the affordances that Audius creates and for whom.

- **Permanently suspended: Platform power and the demise of the public archive,** Anat Ben-David

Abstract: Twitter's decision to ban former U.S. President Donald Trump from its platform has triggered heated debates about the power of private companies to silence elected officials. Many of these debates have focused on the decision's future implications: the future of content moderation, the future of freedom of speech, the future of government-platform relationships, the future of regulation and the future of democracies. However, an overlooked aspect of Trump's de-platforming is its implications on the past: Twitter's "permanent suspension" of Trump not only entails that he would no longer be able to Tweet, but also that the history of the tweets during his controversial presidency will never be accessible. Moreover, the ban exceeds Twitter: the company did not allow the Library of Congress—the public institution legally mandated to preserve presidential libraries—to lend access to Trump's historical tweets on its website. This presentation, accordingly, unpacks the paradoxical notion of platforms' power to "permanently suspend" public figure accounts for understanding the implications of data power on the future of public knowledge, public records, and public history. It builds on previous work on data power, knowing publics and public agency (Kennedy & Moss, 2018) to ask how data power shapes the ability to know publicly? Following Couldry and Mejias' theorisation of data colonialism (2018) and based on my previous work on Facebook (2020), I argue that social media platforms are colonising public archives while emptying memory institutions' public and legal legitimacy. I further examine the various non-institutional archives of Trump's tweets that have been made available to the public by activists, journalists and researchers, as examples of the boundary work currently placed around questions about data power and the right to public knowledge.

- **Citizen Science and Research Data Management: Can You Fight Air Pollution with Data?** Olga Gkotsopoulou, Paul Quinn, Luka van der Veer

Abstract: Citizen engagement is a top priority in the European Union's agenda, to enhance community involvement and participation in policy making through the generation, fair sharing and processing of data. Part of citizen engagement is citizen science; in other words, the participation of the public in scientific research, either with the help of, or outside, institutions traditionally regarded as scientific. In the field of environmental observation and action, there are many diverse citizen science initiatives. We take as example, a selected EU citizen science project for environmental action, specifically with respect to air quality (SOCIO-BEE). The citizen scientists will be encouraged to collect data about air quality in their urban neighbourhood, to observe the increase of pollutants in the air or the spread of smog, so as to raise awareness within the local communities and inform actions at formal level. Those different types of data coming from citizen scientists, will feed into further research; this research will subsequently feed into specific scientific outcomes; and the outcomes will feed into evidence-based decision making at municipality level. In our study, we observe those processes and data flows through the lenses of law and policy, and we scratch upon the layer of data management, from its conception through research design till its interpretation into a plan and its communication to the citizen scientists, as a research protocol based upon co-creation and interdisciplinary cooperation, promoting principles of data quality and respectful participation. We also enumerate challenges posed by the ambiguity around the concept of citizen science, scientific research and new emerging terms, such as data altruism, by shedding light on the existing, applicable legal framework on citizen science and research data management and the ongoing discussions in EU.

- **Social media, social (un)freedom**, João C. Magalhães, Jun Yu,

Abstract: This paper addresses some of the anxieties over why and how social media platforms should be reformed. Instead of discussing specific initiatives, however, it considers the normative foundations that might justify and guide such reforms. We examine the nature of platforms' (in)justice through the lenses of Axel Honneth's neo-Hegelian recognition theory, according to which justice depends on the social realization of legal and moral freedoms, what he terms social freedom. Honneth's framework serves three goals in the paper. First, it allows for a clearer understanding of the dominant views of (in)justice underlying debates on social media harms and possible remedies. We group these views into two clusters, namely market friendly and market disruptive. Whilst noticeably distinct, both clusters seem to be based on legal and moral views of freedom. Second, the paper considers how to understand the role of social freedom in the sort of injustice that platforms can produce. We argue that corporate social media platforms appear to configure an almost symmetrically inverted form of ethical sphere. In these institutions of misrecognition, as we name them, the disrespect of privacy (a key form of legal freedom) and transparency (instrumental to moral freedom) enable a form of unfreedom that can only be realised socially – social unfreedom. We discuss social unfreedom in relation to (i) social engineering, (ii) the collective nature of AI training, and (iii) the reification of intersubjective recognition through datafication. Finally, we suggest that to abolish surveillance, provide transparency and properly tackle mis/disinformation is not enough – however unrealistic these goals might appear today. Platforms can be truly just only if their users are allowed to decide how these spaces can be designed to foster the practical realisation of their own autonomous aims.

Online Panel SZ10 Data and young people ([Sheffield](#))

(Chair: [Ysabel Gerrard](#))

- **Cultures of data amongst UK university students: A case study of multiple stakeholder perceptions of data and learning analytics**, Matthew Thorpe

Abstract: I am currently midway through my PhD and am soon to embark on data collection having gained ethical approval for my project. I intend to present on the progress of my doctorate to date including my rationale, research instruments and methodological approach.

Aims: My PhD intends to engage students as co-researchers to critically investigate from a thematic stakeholder perspective the rationalities that underpin the increasing appetite and desirability for data informed practice in UK HEIs. The study will endeavour to empower students by generating a situated and multifaceted discourse to critically reflect upon, and through which to frame their own evolving data perceptions. Through this process we hope to capture learner voice expressed in a much deeper, intricate and more contextualized manner, to offer the sector a more deserving student perspective on a complex and embryonic field. It is only through more exhaustive approaches we can start to reflect upon how such student focused discourse translates into ethically acceptable utilisations of data within Higher Education settings. The coming together of mixed stakeholders (staff, students etc.) will represent the creation of a 'hybrid forum' (Callon et al., 2009:9) or 'competency group' (Whatmore and Landström, 2011:586) where 'experts' and 'non-experts' can bring differing perspectives and values to the discourse to create a 'dialogic democracy' (Callon et al., 2009:11). It is hoped that by providing a space for critical discourse and an opportunity for participants to consider diverse perceptions from a variety of stakeholders highlighting the 'messy' (Law, 2004) nature of the field, 'Matters of Fact' will evolve into 'Matters of Concern' (Latour, 2004:235) for those involved in the research.

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- **Young people's voices and the disruption of data's power**, Jill Robinson

Abstract: My paper is based on findings from an ethnographically-informed collaborative study undertaken in partnership with the founder and members of Beatfreeks, a youth engagement company based in Birmingham, between 2017 and 2021. This research is set against the backdrop of the political, economic and social challenges faced by governments at all levels following the collapse of global markets in 2007/8, and a society in which digital data and associated technologies have become the new 'normal' for young people. It aims to provide fresh insights into young people's lived experiences of a datafied society in a post-austerity urban environment and into the everyday data practices of officers and politicians involved in government at the local level.

During this collaboration, I explored the influence of digital and/or non-digital data in shaping the power relationships between local government policymakers, young people and youth engagement organizations. My research shows that young people are amongst those who may be absent from, or misrepresented by, policymakers' use of data in decision making and that they are in an unequal power relationship with each other. Thus, I argue it is important to acknowledge and listen to the voices and experiences of young people in any discussion of the consequences of digital data's influence in society since they are as much stakeholders in this debate as are policymakers.

In this paper, therefore, I draw on evidence from my collaborative partnership to discuss how young people may be able to challenge the potentially deficitizing, data-driven narratives of policymakers through the collection and creative presentation of alternative 'small' (analogue) data. I argue that, although 'small data' may not be sufficient to change the views of policymakers, they may disrupt their existing attitudes and thinking and open up opportunities for constructive dialogue between young people and those in positions of power.

- **Power over children's education data: Multi-stakeholder disagreements about children's data processing and best interests**, Sarah Turner, Kruakae Pothong, Sonia Livingstone

Abstract: UK state schools have long been legally obliged to collect detailed information about children that attend for purposes of government policy development and planning. Even more intimate details about children (e.g., their emotional, behavioural and engagement data) may be captured in real time through diverse digital products and services as that are becoming more prevalent in the educational experience of children. We engaged thirty diverse stakeholders, including school governors, head teachers, school Data Protection Officers (DPOs), commercial DPO service providers, relevant NGOs, education union staff and academics in critical conversations to understand the opportunities and risks that processing such data poses under the current data governance regime. Successful engagement with such groups depends on framing questions in such a way that stakeholders' daily professional and lived experiences can be used as a bridge to explore critical, and perhaps less considered, aspects of data processing. Having asked stakeholders to reflect on the implications of their own practices and their understanding (or lack of understanding) of the practices of others, we explore themes of control over data processed from children in education and the value that can be thereby extracted. Despite existing data protection law intending to offer data subjects (children) and those responsible for them some level of control, we identify a series of legal, institutional, commercial and practical barriers to schools' capacity to respect and remedy children's data subject rights. These partly arise because of unresolved and often unidentified conflicts of interest among different stakeholder groups in the education data ecology. The findings highlight missed opportunities for targeted value extraction in children's best interests, as well as ongoing data protection enforcement concerns regarding infringements to rights.

Session VII

Time:	Ottawa 6:20-7:45	Sheffield 11:20-12:45	Bremen 12:20-13:45
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Online Roundtable SZ11 Democratising decision making on data infrastructure: A Stakeholder (Sheffield)
(chair: Julia Rone)

- Julia Rone, Jacky Liang, Janna Huang, Gina Neff, Hunter Vaughan, Lars Rüter

Abstract: Our proposed Roundtable starts from the premise that we cannot think about the politics of data without acknowledging the power relations and inequalities involved in deciding where data is stored, processed, and circulated. Indeed, while data centres and subsea cable networks have featured as key elements in geopolitical discourses on digital sovereignty, pitting the EU, US and China against each other, we know much less about the decision-making procedures and regulatory processes involved in setting up a data centre or inlaying a new subsea cable. Moving beyond the geopolitical dimension of data sovereignty to its democratic popular foundation, we are interested in how local communities, as well as local, regional, and national politicians, have engaged in decision making over the digital infrastructures that house, parse, and circulate data. This question is particularly important given the rapid proliferation of information and communications technologies (ICT) infrastructures in the last few decades, amidst rising demand for the democratization of these infrastructures across the globe.

We bring together stakeholders from different geographical (East Asia, US, Europe) and professional (local politics, business, academia) backgrounds to start a dialogue on key points of intervention in the democratization of global data infrastructure. The roundtable discussion aims to foster an exchange of expertise and a much-needed collaboration between various players to address together key questions of data power, including:

How does digital infrastructure construction and maintenance affect local communities? How does contestation of digital infrastructure vary across different geographical, governmental, socioeconomic, and ideological locales? What are the most common gaps in democratic procedures surrounding data infrastructure construction? How can we make the process of decision making on data infrastructure more democratic? What are the most equitable and inclusive ways to address these problems (local, regional, national, transnational)?

Participants:

Janna Huang (PhD Student, UC Berkeley Sociology)

Jacky Liang (Founder of TelcoX Co. Limited, Vice-Chairman of Promotion Committee of Asia America MultiTechnology Association (AAMA))

Gina Neff (Executive Director of the Minderoo Centre for Technology and Democracy)

Lars Rüter (Local Councillor from OHK, North Holland Province, The Netherlands)

Hunter Vaughan (Senior Research Associate, Minderoo Centre for Technology and Democracy)

Moderator:

Julia Rone (Postdoctoral Researcher, Minderoo Centre for Technology and Democracy)

Online Panel SZ12 Data infrastructures and assemblages ([Sheffield](#))
(Chair: Ruth Beresford)

- **Smart Cities, Data and Human Lives in the UK: An empirical case study**, Seamus Simpson

Abstract: Drawing on a core conference concern of data inequality and agency, this paper provides a critical analysis of 'smart cities', with evidence from one of the UK's largest conurbations: Greater Manchester. Smart cities have been posited as a development of potentially paradigmatic proportions in tackling many of the core challenges of urbanization and adding value to public services. They use devices and sensing to collect data about the physical world in real time; transmit it through communication networks; and process and use the results of data analysis to plan and provide applications to users to improve their living standards (Ciu et al., 2018). The paper argues that, to date, academic research on the people whose privacy is affected by the deployment of smart technologies is distinctly under-developed. The paper addresses this by providing evidence and analysis of privacy concerns around data gathering activity in smart cities, as well as protective measures adopted by people. Conceptually, the paper deploys a cross-disciplinary lens from the literatures on surveillance and participation (Cohen, 2012); discrimination (Gandy, 2012); and privacy and transparency (Nissenbaum, 2012) to argue that smart city developments will not achieve their goals if led by an urban political and technical elite, with often opaque data sharing taking place across the public/private divide with little or no citizen consultation. The paper uses a combination of documentary analysis and citizen-focused workshops to examine how people understand privacy, and articulate privacy concerns and behaviours related to specific smart city technologies. The paper's findings point to a much-needed conversation among policy makers and people on how data should be managed and human rights safeguarded in smart cities.

- **Data in Crisis: engaging tensions in risk, vulnerability, and resilience through data infrastructures**, Katrina Petersen, Agata Gurzawska

Abstract: This talk explores the implications of having interactions around crises progressively based in data and their infrastructures. Drawing on applied research from multidisciplinary projects to design data infrastructures to support collaboration and situational awareness in crises, we explore how these infrastructures become fundamental to how crisis communication and governance can and does work. In the process, we find they become fundamental to what crisis risk means, as they stabilise risk to make the data visible, actionable, and contestable. We argue that such work with data, however routine, requires reflexive perspectives that build mechanisms by which actors can be mutually responsive to each other.

To do so, we examine a series of tensions raised by this infrastructuring. Crisis data -- and the infrastructures used to collate, share, and archive them -- facilitate collaboration and interoperability. They make it possible for crisis practitioners to share each other's strategies, processes, goals, and perspectives. But they also bring together different histories, risk assessments, and socio-political situations. Tensions emerge when trying to provide an underpinning logic that makes data shareable and comparable. Additional tensions arise through the anticipatory conflicts between concrete data needs of a technology and the uncertainties of how crises unfold. Misunderstandings can lead to political dynamics as crisis practitioners from different disciplines and cultures engage with each other through these infrastructures. Combining them meaningfully requires anyone working with the data infrastructures to actively negotiate and deliberate what that combined view includes. Our aim is to provoke those engaging with such data to consider how risk, vulnerability, resilience, and the lived experience of crises are intertwined with the infrastructures that make collaboration and situational awareness possible.

- **Automating the data subject: Under the radar digital advertising and social engineering techniques in Benjamin Netanyahu's Facebook Messenger chatbot**, Elinor Carmi, Anat Ben-David

Abstract: Media, sociology and politics scholars have shown how media technologies and political parties produce different subjects by using profiling, digital tools, and datasets. This presentation demonstrates the next step in producing data subjects that harness platforms' digital advertising techniques with political campaigning in peer-to-peer communication. Focusing on the former Israeli prime minister Benjamin Netanyahu's use of a Facebook's Messenger chatbot during the 2019-2020 election cycles, we show how social engineering methods were used to produce automated data subjects.

Netanyahu's chatbot took advantage of two main components: 1. The ability to harvest and amalgamate multiple datasets and profile the population based on voters' political views; 2. Facilitating Facebook Messenger's affordances such as scripting conversations, sending push notifications, creating buttons, and using personal language. Combining these two components created a unique under-the-hood communication channel that felt as though Netanyahu himself was talking to the person. In this way, Netanyahu's chatbot used personalized persuasion techniques while providing prescribed ways to think and act during the elections. Put differently, the chatbot was used to automate subjects into programmed agents to influence their peers into voting.

We systematically map Netanyahu's chatbot features and content using the 'walkthrough method' (2018) to identify its intended purpose and ideal uses. Further, we analyse the rhetorical techniques by which the chatbot has automated a desired data subject through repetitive messaging, training and habituation, and putting words in people's mouths. Our analysis shows how the chatbot was used to profile voters, disseminate disinformation, push supporters to engage in prescribed actions such as canvassing, and provide data about others. We conclude by showing the asymmetric power relations resulting from under-the-radar digital advertising systems and personal political persuasion: the production of submissive data subjects whose participation, actions and agencies are surveilled and automated by political actors.

Session VIII

Time:	Ottawa 8:00-9:25	Sheffield 13:00-14:25	Bremen 14:00-15:25
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In-Person Panel BP5 Empowering Data Subjects (Bremen)

DOCK ONE (chair: Roger von Laufenberg)

- **Critical is not political: The need to (re)politicize data literacy**, Fieke Jansen

Abstract: Data literacy is slowly becoming a more prominent feature of contemporary societies, advanced on the premise of empowerment it aims to increase the learner's ability to grapple with the negative externalities of datafication. Literacy as such is seen as a social emancipatory process that should enable people to make informed choices about their data environment and increase their ability to actively participate in the discussion that determines the socio-technical systems that will impact their lives (Golden, 2017; Špiranec et al., 2019; Tygel & Kirsch, 2016). If we accept the notion that data literacy is a key social response to datafication (Pangrazio & Sefton-Green, 2020, p. 209) we need to reflect on the politics embedded within the practice, as such I will argue that the mere act of centring data in a literacy approach is political and value ridden. This demands critical reflection on the conceptualization of the learner, the perceived competencies needed to actively participate in a data society and the seemingly 'neutrality' of the practice in itself, which I refer to as the (re)politicization of data literacy. To conclude, this act requires those active in the field to reflect on their own practices and learn from other disciplines who have a more

bottom-up approach to dismantling power structures, understanding inequality and promoting political participation.

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- **“What could I have done: Refused?” Embedding agency affordances as mechanisms for refusal**, Ana Pop Stefanija, Jo Pierson

Abstract: In 2020 we collected insights about the interaction of people with the algorithmic systems of (social media) platforms, based on participatory research. We learned more about their perspectives regarding agency and control (or lack thereof) when interacting with these systems. We intentionally aimed towards a research design that enables a purposeful interaction and provides us with essential insights based on real-life experiences of our 47 participants. This has led to a collection of extensive diaries providing “thick descriptions” and testimonies about data and algorithmic power asymmetries.

The insights painted a complex picture of power imbalances, loss of control over data and algorithmic outputs, feelings of frustration and helplessness, and anger-led calls for finding/building refusal strategies. Quoting one of the respondents: “What could I have done: Refused?” Refusal, or the ability to refuse, is intrinsically related with the issues of agency, autonomy, and power of the individuals. The question is who, how and when can we refuse (to be a subject of data and algorithmic power)? And how can refusal be enabled “by default” into technology design? We propose to embed so-called agency affordances into the datafication and algorithmic systems. These agency affordances, defined as programmed functions and embedded features in the algorithmic systems, should enable, afford, and make agency of individuals operational and actionable. They should ensure the possibility and actualisation of control, autonomy, authenticity, and sovereignty, when it comes to issues of data and consequently, algorithmic decision-making. We see the “baking in” of these elements at the infrastructural level of the artifacts and the societal structure as a step forward in remedying data power imbalances. Since we will continue to “live with data”, we find the embedding of agency affordances as mechanisms for refusal and critical engagement with one’s own data — of utmost importance.

- **Living Proof: Data Practices of Community Organizers**, Roderic Crooks, Lucy Pei

Abstract: Community organizers build grassroots power and collective voice in communities that are structurally marginalized in representative democracy, particularly in minoritized communities. Our project explores how self-identified community organizers in Southern California use the narrative potentials of data to navigate the promises of data activism and the simultaneous risks posed to working-class communities of color by data-intensive technologies. The community organizers of interest to this project work in areas including environmental justice, police abolition, and immigrant rights. This paper reports preliminary results of a multiyear project. Our respondents consistently named the material, financial, intellectual, and affective demands of data work, as well as the provisional, tenuous possibility of accomplishing movement work via narratives bolstered by data. Our interviews also point to two key factors in community organizers' assessment of the efficacy and political potential of narratives built with data: audience and legitimacy.

Online Panel OZ13 Data publics (Ottawa)

(chair: Tracey P. Lauriault)

- **Trust in data - Trust in AI? A multimethod study on usage, acceptance and rejection of Artificial Intelligence**, Caja Thimm

Abstract: There is broad understanding in human centered AI research that one of the most important features of near-future AI is the human category of trust. The assumption is that as AI technologies get increasingly advanced, they will be embedded in the fabric of society and, hence, need to reflect social realities, values, norms and preferences. Still today more than 70% of consumers don't trust AI. Data from scenario-based survey experiments show that people are by and large concerned about risks and have mixed opinions about fairness and usefulness of automated decision-making at a societal level, with general attitudes influenced by individual characteristics. A general concern is the willingness to make data available if one's own interests are affected or covered by it. These studies point to an important perspective on the contextualization of AI, which enables individuals to differentiate between accepted vs. non-accepted contexts. In order to follow up this line of research in more detail, three studies were carried out:

Focus group discussion to compare narratives and conceptions of different social groups concerning contextual AI (3 conditions: experts/female/male participants).

Perceptions of contextualized AI: Based on visual stimuli and a sorting task (images of AI), n=26 participants commented on situated uses of AI (thinking-out-loud design)

Online questionnaire: General and contextual trust in AI and data usage (n=375).

The studies point to the need to develop a model of contextualized trust in data and data usage for AI applications, in order to develop a critical approach toward contexts of data usage for AI and machine learning. Such a first draft of a model based on the empirical results of the studies will be presented in the paper.

- **Juking the Stats: Ethnographies of Disclosure Datasets**, Lindsay Poirier, Quinn White

Abstract: This talk critically examines disclosure datasets – open government datasets that document and aggregate information produced by the same institutions they are meant to hold accountable. The problems with this conflict of interest are demonstrated in examples of institutions deliberately misreporting data or developing creative accounting strategies to “juke the stats.”

Examples of disclosure datasets in the United States include the New York Police Department's (NYPD) Stop, Question and Frisk database (which documents police officer encounters with citizens to track potential racial profiling) and the Consumer Financial Protection Bureau's (CFPB) Home Mortgage Disclosure Act (HMDA) dataset (which documents the demographics of home mortgage applicants to track potential discriminatory lending patterns).

Based on ethnographic studies into the socio-political provenance of disclosure datasets, this talk discusses two critical dimensions of these mechanisms for accountability. First, the definitions underpinning disclosure datasets are often the subject of considerable political contention. What counts as a “reportable entity” or a “reportable activity” comes under debate as certain stakeholders advocate on behalf of reducing regulatory burdens, and others advocate on behalf of strengthening transparency and accountability. The resulting rhetorical shaping of data definitions rarely gets documented in data documentation despite playing a critical role in what values ultimately end up in the dataset. Second, the observational unit for disclosure datasets is often not a person or activity, but instead a form that reporting institutions are required by law to fill out. Forms play a critical intermediary role in translating complex social and environmental issues, such as discrimination and environmental injustice, onto paper and eventually into databases. The standardized prompts presented in forms emerge from and evolve in the wake of cultural commitments and political tensions. This work demonstrates the need for further ethnographic

attention into the creation, maintenance, evolution, and interpretation of disclosure datasets.

- **Can data activism strengthen the agency of ‘common’ users? An empirical study of oppositional affordances and use positions toward Facebook**, Venetia Papa, Dimitra Milioni

Abstract: Data activism tools endorse oppositional use positions, by facilitating user actions that can modify designed affordances and encompass a subversive potential (Milioni & Papa, 2022). However, a question that still bears empirical study is whether ‘common’ users will play the roles envisaged by data activists. This article addresses this question through a user study of two data activist applications: an in-house built application that functions in similar ways to Data Selfie and Go Rando. The first uses Facebook user data and reveals to users the data traces they leave behind and the inferences that can be made about users’ interactions (i.e., habits). In our prior research work, we argued that Data Selfie enables users to discover hidden affordances of Facebook’s key functionalities directed at marketers and reconstruct the meaning of Facebook’s perceptible affordances. Go Rando is a web browser extension that randomizes the selection of the Facebook ‘reactions button to obfuscate the emotional profiles of Facebook users. Providing users with a tool to obfuscate their feelings on Facebook, it obscures the expression of Facebook users’ feelings by removing its more valuable, in terms of their commercial value, quality, namely its authenticity, with a potentially disruptive effect. This function was conceptualized as an anti-affordance. This work poses two questions: First, to what extent the oppositional affordances of these data activism tools, enable the construction of oppositional attitudes towards Facebook? Second, to what extent these tools enable the construction of oppositional use positions evident in users’ subsequent use of Facebook? 30 Facebook users were invited to use the applications for one week. Next, we collected user data and conducted in-depth interviews with the users to investigate their impressions when using these tools. Our findings reveal the actual agentic possibilities of data activism for users other than activists, namely their ability to ‘de-inscribe’ Facebook’s hegemonic affordances. Also, the limits of data activism for non-skilled users are revealed, which relate to the embeddedness of Facebook sociality in users’ everyday live and social relations as well as data activist tools’ restricted ability to weave personalized acts of defiance into a collective representation of ‘we-ness’.

Online Workshop BZ14 Data, Law and Decolonisation Workshop (**Bremen**)
(chair: Siddharth Peter de Souza)

- Siddharth de Souza, Linnet Taylor, Aaron Martin, Hellen Smith

Abstract: This panel discusses contributions from an upcoming special issue at the Technology and Regulation Journal on Data, Law and Decolonisation. It analyses the emergence of law for the digital economy at a global level (in terms of digital rights discourses, laws on data sharing, data for development in international law or competing privacy regulations) from a decolonial perspective. With the emergence of different models of data governance around the world such as public data trusts, data cooperatives and models around data sovereignty, the panel will discuss ways to build a more diverse and a more global understanding of these debates. It examines how governments, international organizations and big tech corporations influence domestic and international legal regimes and shape transnational conversations about data governance and regulation and will reflect on the role that activists and community organizations play in shaping data governance frameworks. Through inviting decolonial perspectives, it reflects on how data can be regulated at a global level, while at the same time giving voice to different cultures and contexts, ideologies and experiences with datafication. The panel will discuss whether existing discourses on the intersection of data and law reflect experiences largely in the Global North, and how material engagements of the digital economy in the South can be articulated and incorporated in terms of the categories, values and norms that influence the building of laws. It will explore how varied resources, priorities, capacities and access to data infrastructures, among

different players in the data market, impact the ways in which they can shape and influence policy; it will examine the tensions between state visions of data markets and technology firms, and in particular the ways in which firms differentiate between geographical regions, depending on the capacities of states to push back and regulate them.

Session IX

Time:	Ottawa 9:40-11:05	Sheffield 14:40-16:05	Bremen 15:40-17:05
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In-Person Panel BP6 Data Governance and Data Subjects (Bremen)

DOCK ONE (chair: Irina Zakharova)

- **The Power of Simulation: Synthesising Ground Truth for AI Systems**, Roger von Laufenberg

Abstract: The impact of Artificial Intelligence (AI) systems on individuals and society is often the outcome of datafication processes within these systems. Looking at the role of data in AI and its mediated impact on society is thus crucial. Questions emerge about “what data is collected and how this data is being manipulated before its use for AI”, or “what kind of data is being produced by AI systems”. Excellent research on this has been presented by Jatón (2021), who highlights the importance of ground-truthing in the process of AI development. Ground-truthing designates the creation of a referential database that is used to train the AI system. E.g., if an AI is applied to recognise cats, its ground truth would be a training-database with different images that are manually labelled as cat and non-cat.

To research how these ground truths are created helps in many instances understanding how certain concepts, ideas, problem-solving mechanisms, politics, and ideologies are translated from the ground truth into the AI system and further into society. Based on interviews with developers of an AI-enabled fall detection system for care homes, I focus here on a novel method used by developers to create such a ground truth. Instead of manually collecting and labelling data within care homes, the developers opt to synthesise this data. Through a 3D modelling program and a motion capture suit worn by the developers, different types of movements are simulated, recorded, modelled, and manipulated into a wide variety of different 3D data, which is then used to train the AI system to recognise atypical movements that might indicate the risk of a fall. The developers are thus able to create their own referencing data for the AI’s ground truth, meaning that data doesn’t have to be collected from the real-world settings anymore, but instead can be entirely simulated. As I argue in this paper, this method contributes to a very narrow understanding of the setting of the AI-application and thus risks aggravating many of the issues that are already present within data and AI systems and their impact on individuals and society.

- **Exploring Imaginaries of Data Subjects in Different Contexts: Contrasting Predictive Policing and Autonomous Cars**, Tayfun Kasapoglu, Mergime Ibrahim, Anu Masso

Abstract: Technologies are developed with certain visions of society in mind. Techno-companies and institutions that use technology often portray innovative data-based technologies in a positive light emphasising their objectivity and efficiency in managing diverse processes. However, a growing body of literature focuses on potential downsides of data and data technologies. This study explores socio-technical imaginaries of data subjects – likely users/targets of the data-based system that make essential decisions for/about people – on data-based technologies contrasting two different contexts, namely, predictive policing and autonomous cars. Autonomous vehicles and predictive policing are studied from a technological view or focus on police officers and designers/sellers of autonomous vehicles. However, exploring perspectives of data subjects provides a critical approach where concerns and expectations of people who often have very little agency in processes of technological governance are underlined. For predictive policing, we investigate the perceptions of international students who become subject to predictive analytics at the borders often without realising it. For autonomous cars, we explore people’s views that ride

vehicles that make decisions on their behalf. To that end, we introduce a mixed-method experimental approach, combining qualitative interviews with eye-tracking technology. While eye-

tracking allows us to investigate people's perceptions of different scenarios where data-based technologies make decisions, qualitative interviews enable us to explore socio-technical imaginaries of data subjects further. In the study, we argue that understanding social norms regarding diversities (or lack of them) in data and in society requires engaging in hierarchical data dialogues from the perspective of data subjects in different contexts. This approach also helps filling a gap by focusing on alternative imaginaries of data subjects who are more likely to be affected by data-based technologies across two contrasting contexts.

- **Continuing the critical tradition of alternative media? Alternative data governance projects between affirmation and critique**, Stefan Baack, Danny Lämmerhirt

Abstract: Alternative ways of governing data that challenge today's data power are gaining attention across different sectors. 'Alternative data governance' (Micheli et al. 2020) as an emerging field encompasses approaches that aim at strengthening collective control over data (like data collaboratives or data trusts) as well as individual control (e.g., personal data stores). At the highest level, what these approaches share is a desire to make data governance more aligned with the interests of data subjects. Researching this field as a critique on contemporary data power promises to shed light on how ideals of data justice and resistance are put into practice. Yet, most research remains conceptual, usually dealing with legal ideal types of data governance and bracketing their design and practical implementation.

This paper instead complements Hartman et al.'s (2020) work on public perceptions of good data management. We first show how founders of alternative governance projects imagine alternatives to a perceived status quo and develop specific media to govern data. Second, we ask how such alternatives compare to, or complement, past attempts to develop 'alternative social media' (Gehl 2015). We explore how the governance of data through consent mechanisms, software architectures, voting mechanisms is envisioned as a key mechanism to redistribute data power understood as entitlements over data and relationships between data subjects and data collectors. Combining interviews and document analysis, the paper finds that actors envision alternative data governance either as an affirmation or a critique of data power. We highlight how founders perceive the interdependencies between their projects and the dominant players in their respective fields to explore these dynamics. In doing so, we argue for understanding alternative data governance models within wider social relations and technical infrastructures.

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- **Inequality in the datafied school**, Signe Lai, Sofie Flensburg, Victoria Andelsman

Abstract: With the growing reliance on digital tools and services in schools, processes of datafication (Mayer-Schönberger and Cukier, 2013; van Dijck, 2014) and commodification have gradually and unnoticeably been built into the infrastructures of the public education systems (Cone et al., 2021). This shifting paradigm in one of the cornerstone institutions of the welfare state (Dencik & Kaun, 2020) evokes a range of challenges for teachers, school managements, and state authorities (Van Dijck, Poell and De Waal, 2018). In this paper, we present the results of a study developed in collaboration with the employee-owned co-operative Analyse & Tal for a

governmental stakeholder in Denmark – the Agency for IT and learning – as part of an explorative effort of understanding the ways children's data is being commodified and monetized by powerful data companies. In the study, we analyze the web and app (iOS and Android) versions of 45 tools and services that are highly used in Danish public primary schools, the types of data they generate, and the market actors harvesting and distributing it. The analysis finds that the digital tools and services collect significant amounts of user data, use it for functional as well as commercial purposes, and distribute it to a long list of third-parties. In light of these findings, we reflect on how new and poorly understood inequalities are emerging alongside the growing reliance on digital devices, tools, and services in the datafied and commodified school. These inequalities extend existing social inequalities in society leaving (some) students with even less power over their personal data.

Online Panel SZ15 Platforms and apps 2 ([Sheffield](#))

(chair: [Monika Fratzczak](#))

- **The Disjuncture: Meanings around Smartphone Surveillance**, Ozge Girgin

Abstract: Smartphones, mobile apps and social media have a crucial role within the contemporary culture of surveillance. Looking at meanings, practices and attitudes of surveillance subjects as they interact with these technologies can help us understand their surveillance values, norms and expectations, and how they engage in, legitimize, or resist surveillance (Lyon, 2017:825).

The presentation will share the findings of one-to-one and focus group interviews conducted with young adults from various social locations in Turkey in relation to their understanding of vertical surveillance practices through these technologies. The interviews enriched with cultural probes approach reveal the disjuncture between the data that young adults consider important and the data in which corporations are interested. This disjuncture can be explained in a Turkish context primarily by dominant surveillance imaginaries arising from contextual interplay of cultural, social and political context. Moreover, the uncertainties that people have with regards to their data flows, and the perceived proximity of consequences of surveillance contribute to the understanding of this disconnect.

While users have a nuanced and contextual conceptualization of their data flows, the emphasis on data security, the unknowns that they cannot envision about data flows, the emotional ties formed with platforms and problematization of surveillance mostly in individual terms contribute to users' understanding of platforms as confidants. The ties users form with platforms are strengthened when government surveillance, the perception of the government as the all-knowing power and the polarized political climate in Turkey are added into this dynamic.

The presentation will explain the nuances of this situation and argue that the above-mentioned disjuncture, along with other factors, impedes the growth of critical discussion about platform surveillance, thus, reinforcing the unequal power relationship between data collectors and the data subjects.

- **How fears of datafication reinforce neoliberal individuality**, Priya Kumar

Abstract: The proliferation of large-scale, data-driven predictive models raises considerable concern about how algorithmic power can constrain people's lives. These concerns are well-founded, as scholars, journalists, activists, and critics have documented how the use of such technologies perpetuates and exacerbates inequities. But how does fear of datafication itself work to constrain people's lives? In other words, how do concerns about datafication coalesce into expectations about steps people should take to protect themselves and others from datafication's consequences? To examine this question, I focus on a specific behavior attracting media and scholarly attention: that of parents posting pictures of children on social media, colloquially called "sharenting." I analyzed nearly 250 news articles on the topic using the framework of governmentality, which is a means of tracing how power works through expertise to regulate in the lives of individuals. I demonstrate how sharenting discourse harnesses the concept of a digital identity to portray children's presence online as a form of risk. I then illustrate how sharenting discourse holds parents responsible for mitigating that risk, even though parents have little control

over data flows involving a child's digital identity. Drawing on governmentality studies of risk as a technique of managing behavior, I argue that concerns about sharenting manifest a distinct form of risk, which I call potentiality risk. This is a response to fears that data-driven processes preclude people from achieving their "best selves." By centering neoliberal individuality over collective wellbeing, efforts to address datafication's concerns may exacerbate the very problem they seek to address. This work extends critical social science conceptions of power and risk into dialogues of datafication. It emphasizes that efforts to mitigate the concerns of datafication must go beyond a focus on the actions of individuals and attend to the broader sociotechnical conditions that give rise to those concerns.

- **Fake popularity for real money: Data bubbles on Chinese digital platforms**, Xiaofei Han, Jiayi Hou

Abstract: This ongoing research examines the constructing process of an interlocking ecosystem that constantly magnifies the data metrics on various Chinese digital platforms. Similar to bubbles in a stock market where the price of assets substantially exceeds their intrinsic value, we propose "data bubbles" as a neologism to describe the phenomenon and ecosystem where different actors game with platform data metrics and pursue inflated popularity. Ranging from individual end-users (fan groups especially), influencers and celebrities, click farms, advertisers to platforms themselves, all the involved actors and entities have their own ends and agendas and thus actively participate in fabricating data bubbles. The ecosystem of data bubbles thus has driven the data metrics on many Chinese platforms no longer representative of the actual popularity and therefore creating data inflation, which ultimately contributes to higher commercial and financial values of the platforms and the potential business risks they bear.

We aim to understand the underlying logic behind seemingly scattered data manipulation practices and how different actors are interlocked to continuously enlarge data bubbles. Utilizing a combined theoretical framework of platform studies (Poell et al., 2019; van Dijck et al. 2019; Kennedy et al., 2015), political economy (Schillers, 2014; Srnicek, 2016; Winseck, 2017), and actor-network theory (ANT) (van Dijck, 2013; Latour, 2005), this research examines both the political economy of data bubbles on Chinese digital platforms and the intertwining relationship between users, complementors, and platforms' technical architecture. By focusing on the case studies of Weibo and Kuaishou, we ask 1) what are the imperatives that have driven different parties into constructing data inflation; 2) what are the techno-cultural and politico-economic mechanisms that consolidate the data bubble ecosystem; and 3) how the multi-layered state's governance together with other social factors will generate unpredictable impacts on the data bubble ecosystem. Our preliminary analysis suggests five interwoven dimensions that structure the data bubble ecosystem: platforms' commodification process, platforms' financial imperatives, the networked value chains of data inflation, user participation, and multi-layered governance (Chart 1 & 2).

Chart 1. Constitutive Dimensions of the Data Bubble Ecosystem

Chart 2. Datafication-Commodification-Financialization Nexus of the Data Bubble Ecosystem

- **Data Power and the Image of Thought**, Emma Stamm

Abstract: In *Difference and Repetition*, Gilles Deleuze writes that "the theory of thought is like painting: it needs that revolution which took art from representation to abstraction." This paper argues that digital data assume the opposite: their theory of thought denies thought the ability to yield non-representative concepts and images. I additionally claim that this theory of thought — which, in accordance with Deleuze's notion of "the image of thought", I call "the digital image of thought" — plays a critical role in the advancement of digital capitalism. This is because it figures the mental labor-power required to yield digital commodities as both immaterial and virtually limitless. In presupposing the instantaneous and endless renewability of thought, it extends market logic into the mental domain.

In an introductory section, I review the Deleuzian concepts of "the image of thought" before defining "the digital image of thought." I then move to the first section, which establishes the attributes that make data computable as the empirical basis for the digital image of thought.

The second part addresses the political theories of cognitive capitalism and psychopolitics, both of which depict the digital economy as reliant on the expropriation of mental labor power. I draw on this literature to indicate the ways in which the digital image of thought supports data capitalism. I also identify a likeness between the economic non-rivalrousness of digital media and the mental limitlessness presupposed by the digital image of thought.

The third and final section explores the mechanisms by which the digital image of thought forecloses all idiographic and non-communicable elements of thinking. Considering arguments made in the first and second sections, I indicate a between the empirical features of digitality and the political economy of data. From there, I restate my overarching argument: the digital image of thought figures the mind as a wellspring of capital rather than a source of politically salient otherness.

Online Panel OZ16 Cultures of data and information (Ottawa)

(chair: Merlyna Lim)

- **Materialising data relations in the home through hybrid methods**, Gaia Amadori, Giovanna Mascheroni, Lorenzo G. Zaffaroni

Abstract: Studying datafication as a socially situated, everyday and embodied experience poses relevant methodological challenges. It requires to assume everyday life as the analytical entry point for empirical investigation which examines data practices and experiences (Kennedy et al., 2015), and hybrid methods that help us materialize data relations.

Adopting a non-media-centric approach, which recognizes how data and the digital are embedded in the everyday life of families, and made sense of through embodied, sensory experiences (Hine, 2015), this study of datafication of childhood and family life (Barassi, 2020; Mascheroni & Siibak, 2021) tries to meet those challenges through a qualitative longitudinal research with families with young children (0-8 y.o) (N=20), comprising three waves of data collection. Drawing upon the concept of families as communicative figurations (Couldry & Hepp, 2017; Hepp & Hasebrink, 2018), the first wave of the research set out to map each family's constellation of actors, their data practices and imaginaries, and the digital media ensemble, through interviews, observations and visual methods such as video tours (Pink & Leder-Macklay, 2012). Second and third wave will expand the range of techniques, adopting digital media diaries and data workshops (Powell, 2018). The analysis combines CGT and network analysis to examine the entanglement between data (generated by the media practices of each household member) and each family configuration. Network analysis allows us to visualise the intersections between data practices, data imaginaries, household power relations and norms, and to construct different typologies of families from recurring patterns and characteristics. The resulting visualisations will be employed as "reflexive maps" in the third wave, to foster reflexivity and co-participation in the data workshops.

This combination of 'traditional' and experimental methods translates the attempt to de-center data to look at the phenomenological richness of data practices in the diverse digital-material contexts of family life.

- **Subjectivities of search vs. Agencies of anonymity: Reimagining Google's cyberorganization through Tor**, Renée Ridgway

Abstract: Made possible by new IT tools of capture, information technology alone has the capacity to automate and informate—imposing but also producing information (Zuboff 1981). Instead of just 'organising the world's information', Google's data power expedites its 'logic of accumulation', where 'informal actions' such as search queries become 'textualised', or codified as data, with signals revealing human behaviour (Zuboff 2015). With 5,6 billion search requests per day collected by devices 24/7, 'ubiquitous googling' (Ridgway 2021) has been grafted as a paradigm for the way users find information as they 'voluntarily provide' data in exchange for free services. Value resides not only in the primary applications of data gathering techniques but rather in the innovative, secondary purposes that were not even imagined when it was first collated (Mayer-Schöneberger & Cukier 2013).

In this visual presentation I show results from Re:search - the Personalised Subject vs. the Anonymous User, which compares Google's personalisation to anonymity searching with the Tor (The Onion Router) browser. With a 'critical ethnography of the self', I designed an 'experiment in living' (Marres 2012), gathering data on myself and imaging the results with my method, 'data visualisation as transcription'. The capturing of users' IP (internet protocol) address enables advertising companies to simultaneously construct subjectivities of search through 'cyberorganization' (Parker & Cooper 2016) — with Google's proprietary algorithm assigning users into collectives of others 'like them' (Chun 2016; 2019).

In contrast to Google's 'behavioural surplus' of commensurated user data that creates prediction products facilitated by surveillance capitalism (Zuboff 2015), tactics of resistance can provide users with obfuscation (Brunton & Nissenbaum 2015), such as Tor that hides their IP address. As one of the few alternatives to circumvent surveillance by state and corporate actors, not only can 'platforms intervene' (Gillespie 2015) but also users with various agencies of anonymity.

- **Towards a Values Based Theory of Data Governance for Civil Society Organizations,** Ushnish Sengupta

Abstract: This paper describes a Values Based Theory of Data Governance for civil society organizations. The values of civil society organizations are different from the values of the private sector and the public sector. Therefore, Data Governance theories for the civil society organizations as a sector need to be different from Data Governance theories for the private sector and public sector. A Theory of Data Governance is the basis for data collection, data usage and publication. The private sector may for example be driven by values of profit maximization, while the public sector may be driven by values of efficient service delivery. These values drive the implementation of data collection use and publication policies across organizations. The values of civil society organizations are often not explicitly identified for data related projects, resulting in defaulting to the values of public or private sector practices. An explicit recognition of the values embedded in data governance is required to mitigate the harms and risks of data related projects. This paper contributes by developing a Values Based Theory of Data Governance for civil society organizations that includes the following elements: (1) National Culture is the primary context for Data Governance, (2) Political Economy is a framework for Data Governance, (3) Organizational Culture is an essential component of Data Governance, (4) Organizational Incentive systems mediate the implementation of Data Governance (5) Verification and Validation is required for ensuring the principles of Data Governance are implemented in practice.

Keynote

Room GW2 B3009 (chair: Juliana Jarke)

Time:	Ottawa 12:00-13:30	Sheffield 17:00-18:30	Bremen 18:00-19:30
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- **BREMEN KEYNOTE: Generative friction: exploring conceptual points of contact between computing sciences, social sciences, and philosophy,** Linnet Taylor, George Fletcher, Alexander Serebrenik, Akraati Saxena

Abstract: This keynote session will be a discussion amongst the founders of Social X, a Netherlands-based interdisciplinary group formed to explore the intersection of fundamental questions in computing sciences, social sciences, and philosophy. In this keynote discussion we will explore the differences between boundary objects (Star and Griesemer 1989, Star 2010, Huvila et al. 2017), a concept created to denote the way scientists manage the tension between diverse methods and viewpoints, and the need for cooperation and common understandings. We use the notion of boundary objects to explore concepts which are interpreted in different ways by computational scientists and social scientists or humanities scholars, but where parallel interpretations can coexist and allow disciplines to collaborate. Examples include 'data,' 'power,' 'information,' 'fairness,' 'progress,' and 'trust.'

In this session we will ask how we can tell if a concept has features of a boundary object or not. For instance, fundamental disagreements about the concept of fairness in relation to computing

theory and applications have arisen over the last decade, and today these arguably function in generative ways that are differently productive from treating fairness as a boundary object and seeking peaceful disciplinary coexistence. In contrast, the notion of 'governance' is understood quite differently across disciplines, but these concepts can coexist and be used in parallel by these different disciplines.

What are the concepts at this intersection of disciplines that can behave as boundary objects, making collaboration possible, and what are the ones that lead to power struggles, critique and disjunctures between fields? Can a concept demonstrate both destructive and generative functions at once, depending on the context? We will suggest consideration of concepts such as knowledge, governance, authenticity, and kindness, engaging with the audience to debate and better understand this tension.

Day 3 - Carleton

Friday June 24

Session X

Time:	Ottawa 3:00-4:25	Sheffield 8:00-9:25	Bremen 9:00-10:25
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In-Person Panel BP7 Data Power Relations and Control (Bremen)

DOCK ONE (chair: Stefan Baack)

- **Data legitimacy and the justification of police power**, Fieke Jansen,

Abstract: The growing use of data-driven policing raises pertinent questions as to how the datafication of society changes the understanding of police power, crime and justice. Media and surveillance scholars have examined the ideological grounds of datafication and the operations of global surveillance regimes. However, how data-driven policing is becoming embedded within the justification and negotiation of police power has been under-theorized. To explore this, I draw on interviews with police practitioners who are developing and deploying data-driven risk scoring and biometric recognition functions in Europe and analyse to what end and on what grounds these tools become integrated within policing. Engaging with the practice of data, what Couldry (2004) has called studying 'media as practice', foregrounds that datafication places normative expectations upon what just and unjust policing looks like. Drawing on social science debates on police power (Bottoms and Tankebe, 2012; Martin and Bradford, 2021) I argue that datafication is becoming deeply intertwined with the legitimacy claim of the police. In this paper, I put forward the concept of data legitimacy as a relational vector to account for the distinct and stratified ways in which data-driven policing is believed to reaffirm the police role as a legitimate authority and in turn justifies their actions.

References:

Bottoms, A. and Tankebe, J. (2012) 'Beyond procedural justice: A dialogic approach to legitimacy in criminal justice', *The Journal of Criminal Law and Criminology*, 102(1), pp. 119–170.

Couldry, N. (2004) 'Theorising media as practice', *Social semiotics*, 14(2), pp. 115–132.

Martin, R. and Bradford, B. (2021) 'The anatomy of police legitimacy: Dialogue, power and procedural justice', *Theoretical Criminology*, 25(4), pp. 559–577. doi:10.1177/1362480619890605.

- **Surveillance Platforms at Work: data and workers' control in Time Doctor and Teramind**, Fabricio Barili

Abstract: This article aims to understand the ways in which worker data is collected, processed and displayed by the work surveillance platforms Teramind and Time Doctor. For this investigation,

I use the methodology proposed by Bucher (2018), Technography, which makes it possible to take surveillance platforms out of the black box by observing what is possible from the inputs and outputs of data beyond the possible imaginaries of the object of study. From there, I analyze how these platforms are positioned, what data they collect and how the generated graphics are offered as the core product. Through the concepts of neoliberal rationality by Dardot and Laval (2018), automation with Sadowski (2017) and Andrejevic (2019) and the data imaginary proposed by Beer (2019), I discuss how some of the main elements of the platforms are present since the construction, inferences during the workday and in decision making. In addition, this text serves as an important discussion in the area of both work and datafication, as it elucidates the way in which power relations between employer and worker are enhanced by digital, invisible, ubiquitous and pervasive technologies. Both platforms resignify the forms of power over workers with Teramind acting deeply in the control of each worker's action and with a wide range of pre-configured automations, while the Time Doctor aims to measure the productivity rates of each individual ensuring, according to the company's website, that only the time worked is remunerated. With that, I propose to present a discussion about these platforms that, even when dispensing with micromanagement and the manager's watchful eye, does not make the work process less supervised, on the contrary, it deepens and intensifies the look at workers.

- **Data-Driven Technologies in Institutional Context: The Case of CityZone in Tel-Aviv,** Tamar Ashuri

Abstract: In May 2018 the Israeli Ministry of Health introduced a new scheme – providing more than 800 startups access to digital health records of the entire Israeli populations. This is one example of a growing phenomenon – public institutions provide commercial firms access to data which contains identifiable information. My research focuses on a resembling scheme – a novel initiative prompted by the city of Tel Aviv in partnership with Tel Aviv University called CityZone. Early this year, CityZone initiators invited selected start-ups to a hub established in a 20-acre gated Hi-Tech Park populated by around 15,000 people. For the selected urban startup, this means CityZone is tantamount to a living lab; where products can go through iterative improvement cycles before being released. The main draw for the startups is raw, real-time data from the city's various departments—everything from police, traffic, and hospital data to sensors placed on streetlights. The CityZone program is designed to identify, accelerate, and disseminate the kind of innovation growing cities now desperately need. Apart from that, the financial incentives are vast. Based on an ethnographic account of startups operating in the hub, we explore how the integration between data providers (City of Tel-Aviv) and data processors (tech startups) affects the creation and dissemination of urban knowledge. Core question is how are bureaucratic forms of supervision and control integrated into the development of technology, in the processing of individual data and the circulation of urban knowledge?

Session XI

Time:	Ottawa 4:40-6:05	Sheffield 9:40-11:05	Bremen 10:40-12:05
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In-Person Panel BP8 Transgressive Tech: Power shifts during the Covid-19 pandemic (Bremen)
DOCK ONE (chair: Linnet Taylor)

Linnet Taylor, Aaron Martin, Siddharth de Souza, Joan Lopez Solano

Abstract: The aim of this panel is to theorise the findings of the Global Data Justice project's Sector Transgressions work, which examines the ways in which technology firms are expanding their reach, changing their business strategies and capturing new public functions and market positions due to the Covid-19 pandemic. This research is grounded in the work of Tamar Sharon on sector transgressions based on Walzer's 'spheres of justice' (Sharon 2020), theories on orders of worth (Sharon 2021), and the legitimacy of private technology firms in the public sphere (Taylor 2020).

We will explore the tensions between longer-term strategies of technological infrastructure investment and market-building, and firms' immediate responses to pandemic-related opportunities, in order to understand the character and implications of this rapid expansion of commercial technological power. The pandemic radically alters contexts for innovation: firms are incentivised to shift, optimise and reconfigure their activities while, at the same time, supervisory scrutiny and controls on competition are being scaled back by governments. The pandemic has seen big tech firms make bids for international infrastructural and market power in relation to healthcare, transport and logistics, security, identification, fintech and many other domains, but it has also opened up opportunities for technology firms in general to become less regulated, more integrated with state power, and to acquire more influence over the public sphere. We will present our project's findings on issues of political legitimacy, ethics and regulation, as well as the conditions under which civil society and regulators may strengthen their ability to influence and control these corporate strategies. While the original project was focused on the EU, through research collaborations with partners we have added components of the research from other regions including Asia, East Africa and Latin America, and will situate our findings in relation to the global context.

BOOK LAUNCH

- **DOCK ONE** (Juliane Jarke)

Time:	Ottawa 7:45-8:45	Sheffield 12:45-13:45	Bremen 13:45-14:45
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- **BREMEN BOOK LAUNCH: New Perspectives in Critical Data Studies**, Andreas Hepp, Juliane Jarke, Leif Kramp w/ Discussant Tracey P. Lauriault

For each of the three sections of the book, one of the contributors will give a five-minute introduction to their chapter:

- **Section I: Global Infrastructures and Local Invisibilities**
Jack Linchuan Qiu (Department of Communications and New Media, National University of Singapore): [Data Power and Counter-power with Chinese Characteristics](#)
- **Section II: State and Data Justice**
Lyndsay Grant (School of Education, University of Bristol, UK): [Reconfiguring Education Through Data: How Data Practices Reconfigure Teacher Professionalism and Curriculum](#)
- **Section III: Everyday Practices and Collective Action**
Katrin Amelang (University of Bremen, Germany): [\(Not\) Safe to Use: Insecurities in Everyday Data Practices with Period-Tracking Apps](#)

Respondent Tracey P. Lauriault (University of Carleton, Canada)

About the Book: [This Open Access book](#) is based on contributions from the 3rd Data Power Conference in 2019. It examines the ambivalences of data power. Firstly, the ambivalences between global infrastructures and local invisibilities that challenge the grand narrative of the ephemeral nature of a global data infrastructure. They make visible local working and living conditions, and the resources and arrangements required to operate and run them. Secondly, the book examines ambivalences between the state and data justice. It considers data justice in relation to state surveillance and data capitalism and reflects on the ambivalences between an "entrepreneurial state" and a "welfare state." Thirdly, the authors discuss ambivalences of everyday practices and collective action, in which civil society groups, communities, and movements try to position the interests of people against the "big players" in the tech industry. The book includes eighteen chapters that provide new and varied perspectives on the role of data and data infrastructures in our increasingly datafied societies.

Ottawa Welcome & Keynote

Reader's Digest Resource Centre (Tracey P. Lauriault)

Time:	Ottawa 9:00-10:30	Sheffield 14:00-15:30	Bremen 15:00-16:30
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Opening Remarks: Joshua Greenberg, Director, School of Journalism and Communication, Carleton University

OTTAWA KEYNOTE: Data Sovereignty, Jonathan Dewar

Jonathan Dewar will discuss the concept of First Nations data sovereignty in Canada and the work of the [First Nations Information Governance Centre](#) and its partners to advance a national data governance strategy.

Session XII

Time:	Ottawa 10:45-12:15	Sheffield 15:45-17:15	Bremen 16:45-18:15
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In-Person Panel OP1 Data and rights (Ottawa)

Reader's Digest Resource Centre (chair: Irena Knezevic, Carleton University)

- **Exploring Feminist Media Archives in the Age of Big Data**, Brianna Wiens, Shana MacDonald

Abstract: Within the academy and in public discourse, we are often faced with misleading characterizations of complex feminist issues that flatten feminism into unproductive sites of tensions and hostility. For example, the trope of mothers and daughters fighting through ideological generational fissures distracts from more pressing issues and histories of inequities stemming from feminist frameworks tied into cis hetero, white supremacist, colonial, capitalist patriarchal power. Grounded in the emerging field of data feminism, a feminist approach to big data (D'Ignazio and Klein 2020), this conference paper aims to reflect on our methodological processes in our current archival project with the Archives Unleashed Cohort Program, "Everything Old Is New Again: A Comparative Analysis of Feminist Media Tactics" (2021-2022). The project explores a collection of feminist archives [1] for intersectional, queer, trans, and indigenous feminist media tactics from different historical eras that are often overlooked in favour of the history of white, liberal, feminist practices. Reflecting on the current technologically motivated big data moment of archival media research, we take seriously both small and big data approaches to the archives, considering the important feminist narrative-based and experiential nuances that big data can obscure in favour of generalizations, trends, and patterns. As such, this paper will explore the ways that we have negotiated the tensions and possibilities of both small and big data feminist methodologies in our work as humanities based digital media scholars. We will speak directly to how an intersectional, anti-racist, anti-colonial and queer feminist ethos has guided our focus on how different forms of data power operate within the research process, from the formation of research questions to data collection, the barriers of non-specialists to web archival materials, and to analysis, conclusions, and knowledge mobilization. In doing so, we aim to reflect on the kinds of emergent questions that become possible from our hybrid approach to (small and big) data and how data can both enable and constrain feminist researchers in the acts of collection and analysis.

[1] For media practices from 1960-2000 we look at: Tamiment-Wagner: Feminism and Women's Movements; Michigan Womyn's Music Festival Collection; Fales Library New York Feminist Art Institute and Guerrilla Girls Broadband archives. For digitally focused media and activism from 2000 onwards we look at: Ada: A Journal of Gender, New Media and Technology archive; Webcomics -2019 collection; Schlesinger Library's #MeToo Web Archives collection.

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- **Self-tracking Algorithm: Problematic Knowledge-making and (Dis)embodied Practices,** Elise Li Zheng

Abstract: Self-tracking with wearable devices has become a notable trend in consumers' health-tech market and clinical settings. At the same time, a growing body of literature in Science and Technology Studies (STS), critical media studies, and sociology of health and illness has been addressing the neoliberal, individualized nature of self-surveillance by analyzing the impact of bodily data collection, interpretation, and reflection of self-trackers. However, the "backstage" algorithms of self-tracking have not been extensively studied from a social perspective, and the implications of processing, interpreting, and presenting bodily data to users for personal and collective decision-making need to be examined.

Personal Activity Intelligence (PAI), an algorithm for evaluating the amount of physical activity with personalized data collection, has been adopted by several wearable devices available on the consumer's market globally. The heartrate-based algorithm claims to be supported by clinical evidence and effectively promotes physical activity, yet its application on wearables is subject to critics. Using publicly available sources such as media releases, academic publications, and users' feedback on social media platforms, my study draws on STS theories of self-surveillance, knowledge-making and technological practices to critically examine the "transfer" of data from clinical evidence to real-world interpretations with self-tracking algorithms. It addresses 1) the gap between knowledge and knowledge "practices"; 2) the neoliberal, individual-centered approaches that correspond to the engineered value of wearable applications; 3) how to harness the power of interpretive algorithms to facilitate health-related decision-making in more ethical and socially sensitive approaches.

- **Assessing Power Relations and Digital Rights in Data-Centric Initiatives in Brazil,** Jess Reia, Luã Cruz

Abstract: Brazil has been leading global digital policy discussions for decades through its active involvement in international decision-making forums and via participatory development of regulatory frameworks, such as the recent General Data Protection Law from 2021. Even with its robust civil society ecosystem and research-oriented organizations, the last five years presented new challenges in terms of advancing a positive agenda towards public interest technology and the regulation of data-centric initiatives. Artificial intelligence, smart cities, and the Internet of Things have been the subject of top-down, corporate-led policy and lawmaking, going against the country's tradition of multistakeholder debates. In various Brazilian cities, local governments are purchasing and deploying data-centric systems that often violate digital rights (notably human rights, privacy, and data protection), do not consider principles of fairness, accountability and transparency in their implementation, and overlook possibilities of civic engagement. While certain technologies have been largely contested, or even banned in cities in the Global North (especially live facial recognition systems), companies are still offering them as viable, efficient solutions for cities in the Global South. Having this context in mind, the main goal of this paper is to present an analysis that explores how Brazilian cities are integrating digital rights and governance issues into newly adopted regulatory frameworks. The questions we address here are: How are power relations between state and non-state actors translated into municipal data-centric regulatory frameworks in Brazil? Are digital rights taken into account when designing data-centric laws and governance mechanisms? What lessons can be shared with the global community? In terms of methods, we used a combination of qualitative methods: in-depth semistructured interviews with key stakeholders, FOIA requests, participant observation at expos and datacenters, and policy and legal analyses. We adopted a multidisciplinary approach (Law, Science & Technology Studies, and Data Science), drawing from fieldwork conducted between 2018 and 2021.

- **Youth As “Databound”: Data Afterlives and the Right to be Forgotten**, Katie Mackinnon

Abstract: “Growing up online” is a phrase often used by academics and policy experts to describe and examine the impact of immersion in digital technologies from an early age and the datafication of digital experiences. In my research, I work with old data, or web materials made by young people throughout 1994-2005 and engage with the many ways that the afterlives of data are simultaneously weaponized, desired, destroyed, and kept.

The emergence of digital technologies as memory or storage devices, like the archiving feature on social media platform’s apps or the automated web crawlers from the Internet Archive, has changed the lifespan of data. Through collecting and storing data, the messy and transitory nature of growing up is cast in stone. Chun’s (2016) “leaky network” is the constant exchange of traceable information that is fundamental to digital connectivity, once consent is given for materials to be public, they remain that way – and circulate – forever. The exposure of intimate data, that which is often part of participating in web community, is a violent act, and is often enacted against young queer women, trans, and non-binary people.

The Right to be Forgotten, an individual’s right to be removed from findable online contexts, becomes relevant as we consider the life-worlds that are built on the web. As Regan and Burkell (2018) demonstrate, youth have a right to develop, make mistakes, and be in control of their online identities. This paper introduces the term “Databound,” as a way of conceptualizing the long-term, personal impact of datafication, where one is simultaneously bound to their data and bound to become data. Through this framework, we can more clearly conduct longitudinal studies of cultural and political impacts of data power.

Works Cited

Chun, W. H. K. (2016). *Updating to remain the same: Habitual new media*. Cambridge: MIT Press.

Burkell, J., & Regan, P. (2018). *The right to be forgotten and youth: Philosophical and psychological contexts*. Human Rights Yearbook. Ottawa, Canada: Human Rights Research and Education Centre.

Online WORKSHOP SZ17 ROUNDTABLE Administrative data (Sheffield)

(chair: Susan Oman)

- Susan Oman, Kevin Guyan, Emiliano Treré, Marlee Tichenor

Abstract: Much critical study of datafication focusses on what are called Big Data for their increased speed, size, availability, insights – and indeed power. Yet administrative data have long been collected and pivotal in decisions that affect our life chances, livelihoods and quality of life. While administrative data are culturally considered comparatively mundane, as they ostensibly are used to improve society, studies of their histories and developments reveal this is in tension with their value in acquiring and retaining power, which in turn shapes data and their uses.

This panel will begin with four short provocations and/or positions on different ‘types’ and contexts of administrative data, presenting ways in which administrative data for specific social goods (i.e., demographic data; well-being data; welfare data; sustainability data) end up doing social bads, owing to both mundane administrative issues and longstanding data power issues.

Susan Oman will historicise the relationship between well-being data and power; Kevin Guyan will present on queer data, issues of management and misrepresentation; Emiliano Treré will present on COVID 19 data and the politics of (in)visibility of Global South populations; Marlee Tichenor on the push for ‘disaggregated data’ in the sustainable development goals (SDGs) with claims to data equity.

These short provocations will inform a facilitated cross-panel discussion on the following questions:

How to address the lack of care for marginalised populations in the administration of administrative data?

How can we unravel the politics of visibility and invisibility that are arguably the biggest challenge for administrative data for good in a way that changes practice?

Can / should critical data studies be reparative and/or activist? What would that look like, and what are the limits? Can we move beyond a binary of engaging stakeholders versus dismantling systems?

Online Workshop OZ18 Parc EX (Ottawa)
(chair: Pamela Robinson)

- **Gentrification and Data Power in Parc-Extension, Montreal**, Emanuel Guay, Yannick Baumann

Abstract: This paper is proposed as part of a panel titled "The Importance of Data in Mobilizing Against Gentrification in Parc-Extension, Montreal", submitted by Alessandra Renzi (Concordia University).

This paper presents the social context in which the Parc-Extension Anti-Eviction Mapping Project (PEAMP) and the Digital Divides Project take place, as well as the broader activist ecosystem that these two initiatives belong to. This is done by paying attention to residential dynamics and grassroots mobilization in Parc-Extension, a low-income neighborhood in Montreal characterized by a high proportion of racialized tenants and recent immigrants among its residents, as well as the ever-accelerating gentrification which has weakening the social fabric of this tight-knit community. We first provide an overview of the neighborhood's history and the evolution of challenges faced by tenants, following various social and economic changes over the past four decades. We then analyze the main factors which contribute to the current gentrification of Parc-Extension, notably the creation of a federally funded AI sector in the neighborhood's vicinity and the construction of a high-tech campus by the University of Montreal at the southern border of Parc-Extension. We examine the impacts of gentrification on the neighborhood's most marginalized residents, based on our involvement with the local tenants' rights association, the Comité d'action de Parc-Extension (CAPE), and we then situate the critical use of data advocated by PEAMP and the Digital Divides Project within a broader set of strategies used by residents, organizations, and activists to challenge evictions, abusive rent hikes and increasing housing precarity. We conclude by showing some directions in which our collective work is heading, and by highlighting relevant lessons for organizations and networks which might be interested in launching similar initiatives in other neighborhoods facing gentrification and displacement.

- **The Parc-Ex Anti-Eviction Mapping Project: Data Activism and Counter-Mapping for Housing Justice**, Tamara Vukov, Sepideh Shahamati

Abstract: The Parc-Ex Anti-Eviction Mapping Project (PEAMP) emerged in 2019 to highlight housing struggles and to support the residents of Parc-Ex in their fight against intensifying gentrification and displacement. By using digital mapping tools, quantitative and qualitative data, research, writing, and creative practices, the PEAMP project highlights the role of institutions and businesses like the University of Montreal and the tech companies on rent increase and displacement in Parc-Ex neighborhood. Recently, the PEAMP group published two online maps to represent eviction data and community resistance in the neighborhood. The Eviction Map uses the data collected by the housing association in Parc-Ex (Comité d'action de Parc-Extension) to represent the distribution of evictions in this area since 2017. The Power Map visualizes recent community actions and resistance, as well as the needs and desires expressed. This paper looks carefully at these two mapping projects and discusses the potentials and risks of using sensitive community data for activist cartographic efforts, along with the long-term, less visible work required to build durable, sustainable community and activist social infrastructures for data co-creation and visualisation. The paper studies the importance of negotiating the emerging tactical visibilities and

opacities of data co-creation and privacy in activist mapping projects, and highlights the shifting considerations that have been taken to minimize the risk of potential harm to residents and participants during this specific project. Drawing on this counter-mapping experience, this paper emphasizes the importance of data protection in activist projects, and the existence of cartographic limitations for sustaining a secure online community mapping initiative. In so doing, and in contrast to dominant methods of extractive data collection that many digital and research infrastructures operate upon, this presentation highlights the less visible but no less important work of building social infrastructures and community relays that undergird effective and accountable data activism.

- **Activist ecosystems vs AI ecosystems**, Alessandra Renzi, Janna Frenzel

Abstract: Montreal, QC is now Canada's largest AI center, with tech giants and start-ups setting up shop near Parc Extension, the development of a federal AI supercluster, many R&D institutes and campuses in the area receiving federal, provincial and municipal funding. This AI initiative is built on the notion of an ecosystem instead of that of an AI cluster. Following a business model developed in the nineties, ecosystems build ties and connections among industries, sectors and government institutions rather than simply promote the specific attributes of a given cluster or hub. Montreal's AI ecosystem also promotes the idea of AI for good. While this idea acknowledges that AI does not in and by itself lead to positive outcomes but needs to be shaped in certain ways to do so, it is markedly different from notions of economic and environmental justice that grassroots groups have championed. Drawing on what Sara Safransky calls the "geographies of algorithmic violence" of racial capitalism, this paper presents data resulting from ongoing community action research and housing justice organizing through the lenses of AI policy, platform studies and critical urban planning. We highlight some of the AI ecosystem's constituting components and processes of consolidation that movements of resistance could tackle. Specifically, we explore how narrow conceptions of sustainability are used within Montreal's AI ecosystem to deflect from broader questions of social justice and accountability to the communities where the industry is expanding its physical presence. We suggest that local networks constitute an alternative "ecosystem" built around mutual aid and solidarity, where the affordances of technologies are integrated as a way of commoning resources, breaking isolation and building relationships.

- **Results from Digital Divides and Building Capacity**, Alex Megelas, Leonora Indira King

Abstract: The development of the technology and artificial intelligence sector in Parc-Extension (PEX) and surrounding areas juxtaposes not only the digital barriers present in the neighborhood, but is also contributing to rapid gentrification amidst a growing housing crisis while compounding the current disparities and structural barriers already facing residents. For example, many residents are struggling with immigration challenges, food insecurity, barriers to language and employment, discrimination, and access to healthcare services as well as affordable housing. With the COVID-19 pandemic further exposing these systemic inequalities while accelerating our transition to an increasingly virtual world, many PEX residents were unprepared as their only digital tool was their cellphones. Not having access to a laptop or computer at home combined with low rates of digital literacy meant that many families could not fully benefit from online education or training. More urgently, these digital barriers made it difficult for many residents to navigate their vaccine and medical appointments. It also created a disadvantage for their children who had to engage in remote learning when schools were forced to close. As a result, several residents and community leaders began to mobilize towards collective action and mutual aid strategies. Door-to-door strategies were implemented, a refurbished laptop program was created, and a food sovereignty project was established. In this paper, we highlight several examples of solidarity and successful mobilization efforts as well as propose some recommendations to promote digital literacy in PEX. These recommendations integrate multiple sources of knowledge and reflect collaborative, bottom-up and community-based approaches to research. By building relationships with residents and working alongside community groups, we were better positioned to inform effective resource allocation, identify gaps in service delivery and propose collective solutions that address the urgent needs of the community.

Session XIII

Time:	Ottawa 12:55-14:20	Sheffield 17:55-19:20	Bremen 18:55-20:20
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In-Person Panel OP2 Data and the state (Ottawa)

Reader's Digest Resource Centre (chair: Dwayne Winseck, Carleton University)

- **Deobfuscating State Security Surveillance Capabilities in Canada**, Evan Light

Abstract: What, precisely, are the human surveillance capabilities of state security services, writ large, and what are the legislative and policy frameworks that govern these capabilities? This has been a vexing question for surveillance studies scholars working in various fields, for civil society organizations and even for lawmakers themselves. Given the wave of revelations concerning unwarranted mass surveillance operating outside normal bounds and oversight, urgent demands for policing reform, and the expansion of policing powers in Canada during the COVID-19 pandemic, these questions have become urgent. Before they can be adequately regulated, the surveillance capabilities of the state security apparatus must first be clearly understood. Our project initiates a comprehensive study of the surveillance capabilities of state security services—from the municipal to the national. We aim to detect patterns of collaboration and exchange among state security services and to comprehend the surveillance capacities of the state at large. Our scope is limited to the direct surveillance of citizens and their actions and is especially relevant in a post-COVID-19 era, where unregulated surveillance technologies have expanded in the name of public health and when both the effects of the pandemic and of surveillance have been shown to disproportionately affect racialized communities. The initial 2-3 year stage of the project focuses on the largest city in each province, provincial police forces and federal security agencies. The project relies heavily on access-to-information/freedom-of-information requests and other strategies for gaining access to government information related to the purchase, distribution and use of surveillance technologies. We aim to create a public repository of our research data for use by fellow researchers and the general public. This paper provides an overview of a project's initial experiences and methodological developments, methodological obstacles encountered and preliminary findings, including a centrally-provisioned federal cellphone hacking program.

- **Automating Public Services: Learning from Cancelled Systems**, Joanna Redden

Abstract: This presentation summarizes findings from the Automating Public Services: Learning from Cancelled Systems research project (2020-2022). The team project involved investigating why government departments and agencies across Western democracies are deciding to cancel their use of automated decision-making systems (ADS). We argue that researching the factors and rationales leading to cancellation provides a means to get beyond the myths of technology to better understand its limits and facilitate more debate about complexity and acceptability. The findings presented combine the results of our scoping exercise as well as 12 case study investigations. The scoping exercise involved informal conversations with experts across our areas of investigation and keyword searches of media content and government websites. The 12 case study investigations involved analysis of relevant documents such as legal documents and audits as well as interviews with people who had direct experience with the case study in question. In this presentation I will discuss the 61 cancelled systems we identified in Australia, Canada, Europe, New Zealand, the United States and the United Kingdom. The presentation will also detail the range of factors we found influencing decisions to cancel systems including: concerns about effectiveness, civil society critique and protest, critical media investigation, legal action, governmental concern and review, and political intervention. We present specific recommendations to work toward preventing harm and increasing collective well-being in datafied societies. These recommendations range from steps needed to increase transparency and accountability, practices to address systemic injustice and ensure greater responsibility for ADS histories, reviews of legality and the need for politics of care.

- **Emerald Extractivism: Borders, Energy, and Data Technologies in Ireland**, Patrick Brodie

Abstract: In November 2020, a video surfaced on Twitter showing the earth moving underneath the feet of a local hillwalker. The video was documenting a massive peat landslide at the border between County Donegal (in the Republic of Ireland, ROI) and County Tyrone (in Northern Ireland, NI), which was caused by the construction of the 19-turbine Meenbog Wind Farm. The landslide destroyed a vast swathe of active peat bog and polluted a significant watershed which spanned both sides of the border, prompting governmental and legal action from agencies and organizations in ROI, NI, and the UK. A key piece of the puzzle, however, was that the Meenbog Wind Farm had in 2019 sold all its future energy to global logistics and cloud giant Amazon Web Services to power its data center operations in Dublin, over 200km away from this wind farm site in rural Donegal. The data infrastructure company's decarbonization efforts were following fault lines and toxic legacies of colonial expansion, the imagined perpetual growth of data systems having unintended consequences at the contested border between ROI and NI. By analyzing data center and energy policy, public discourse around these infrastructural systems, and drawing upon site-specific fieldwork, this paper will confront the re-organization of political and environmental relations at the border between ROI and NI with regards to emerging renewable energy and data entanglements. Engaging with vibrant discourses of "green extractivism" during the transition to renewable energy, the paper will approach bordering mechanisms cutting through Ireland as sites of generative contestation about what present and future extractive energy and data supply chains will look like, who will bear their burdens, and who will have a voice in shaping them.

- **Wiring the world: Facebook Connectivity between sovereignty and colonialism**, Guy T. Hoskins

Abstract: The inequities of informational capitalism have become highly visible in recent years. A so-called 'techlash' - popular awareness of the destructive impacts of platform power has emerged in response to myriad factors. The question of platforms accepting responsibility for the harm caused by the content they circulate is chief amongst them. What has elicited much less concern, is the question of platform control over infrastructure. The perceived 'invisibility' of infrastructure (Vatanparast 2020) may in part account for this elision, but the material reality of a sharp rise in platform-led development of submarine and terrestrial internet infrastructure should also concern the protagonists of the tech-lash. The focus of this paper is indeed Meta Platform, Inc's (formerly Facebook, Inc.) Connectivity Program, a multi-faceted strategy consisting of a variety of subsea cables, IXPs, CDNs and other terrestrial technologies. Meta's focus on building infrastructure connecting regions in the global South runs parallel to its pervasive and much-criticized Free Basics zero rating mobile app (Nothias 2020). Although purporting to "close the digital divide" (Meta Connectivity 2022), what is not disclosed by Meta is the imperative to gain secure valuable data transmission capacity to serve its growing network of data centres worldwide.

In light of the degree of control that Meta is developing over Internet access in the global South, connecting millions of users, this paper asserts that a critical political-economic analysis of its Connectivity Program is much needed. By using data available from Telegeography, Meta's own disclosures, and access to research from the Global Media & Internet Concentration Project, this paper will trace Meta's existing and planned infrastructure projects, tied to its data centres and its Free Basics program, to glean an understanding of the degree of control Meta leverages over the communications networks of societies in the global South. Control in this case will be determined by measuring the size of Meta's infrastructure investments relative to the existing network media economy in each country in which it operates by market share and data transmission capacity. On a theoretical level, I will explore the tension that exists between Meta's investments allowing Southern states to pursue economic development and technological sovereignty – as they evade the infrastructure owned by other governments – while at the same time ceding crucial control over their communication systems in a way corresponding to 'data colonialism' (Couldry & Mejias 2019).

Ultimately, as one of the foremost concentrations of data power in our digital age, it is imperative that we understand how Meta's infrastructure projects impact the agency and autonomy of millions of citizens in the global South.

Online Panel OZ19 Regulation and governance (Ottawa)
(chair: Susana Vargas Cervantes, Carleton University)

- **Prevalence of private interests in the Brazilian public consultation for regulating software as medical device: AI, digital health and data power**, Raquel Rachid, Luís Gonçalves, Leonardo Costa, Marcelo Fornazinm, Bruno Penteado

Abstract: Broader if compared to e-health, digital health incorporates artificial intelligence technologies that may influence health related decisions - which is being discussed worldwide, considering the insufficiency of the regulations applied to medical devices when they are software and not only hardware. In view of the public consultation process established by the Brazilian Health Regulatory Agency - ANVISA to receive comments on the proposed normative act that recognizes software as medical devices (greatly influenced by the United States Food and Drug Administration - USFDA regulation), this work analysed all contributions to the draft proposed by ANVISA, as well as documents attached as references to these comments. During this empirical research, that also belongs to a broader theoretical ongoing evaluation, it was mainly observed the prevalence of private interests' representation (over 80%) along the process, which could not be prespecified once ANVISA does not evaluate eventual conflicts of interest from people that contributed to the process and did not declare affiliation to a specific segment. In addition, the complete absence of representation of the Brazilian Health System - SUS users' segment was verified in the public consultation procedures. Considering the tactic of huge technology companies on lobbying and influencing legislations, also using the artifice of engaging academy representatives for these purposes, there is a relevant concern on monitoring processes that are supposedly intended to bring social participation but end on providing legitimacy to recommendations brought solely by a sector. The drive to regulate an activity that involves sensitive data and is also able to inflict risks to human beings when used for health purposes provides an expectation of a careful, detailed and participatory process that should call for contributions from those who will be impacted by the data power and do not have equal conditions to influence strategic decisions - a delicate matter in the Brazilian scenario.

- **Situated data values versus global regulatory trends: Exploring universalism versus specificity in Latin American data policy advocacy**, Katherine Reilly, Ana Rivoir, Maria Julia Morales

Abstract: In their recent work about platform economics, Mansell and Steinmueller (2020) argue that public interventions to regulate digital platforms must balance public values that "exist in tension with each other and with the desirability of generating economic value" (p. 2). For digital rights advocates in Latin America, finding this balance often implies tensions between, on the one hand, internationally recognized strategies for regulating digital capitalism, and, on the other hand, local cultural specificities and regional expressions of capitalism (Schneider 2009). These tensions have implications for campaigns to influence the governance of digital transformation within specific local spheres of social action. In this piece we explore the results of field research about local data values within specific local contexts conducted in partnership with Derechos Digitales in Chile, Fundación Karisma in Colombia, TEDIC in Paraguay, HiperDerecho in Peru, and ObservaTIC in Uruguay. On the one hand, the policy advocacy of these digital rights organizations has tended to align with international campaigns to regulate data privacy, surveillance, freedom of expression and security. But on the other hand, the results of our community interventions and research demonstrate that public values around data reflect local needs, desires and cultural tendencies within specific domains such as reproductive health, migrant settlement, labour rights, social security or health information. We draw on these results to explore the implications for data advocacy and data governance, as well as critical data power research. In particular, our work

challenges critical researchers to address nuance and specificity within larger critiques of data colonialism (Couldry & Mejias 2019) and capitalism (Zuboff 2019).

- **Data culture or cultures of data? Libraries and archives between seduction and resistance**, Nathalie Casemajor, Guillaume Sirois

Abstract: In the cultural sector, the appeal of behavioural data models now extends well beyond the cultural industries to touch sectors that are traditionally further from industrial logics. Many cultural organizations are striving to adhere to a "data culture" promoted and funded by governments with the objective of developing content discoverability, audience targeting and personalized recommendations.

From the perspective of critical data studies (Crawford et al., 2014; Kitchin and Lauriault, 2014), this paper interrogates the deployment of this data culture in the public libraries and archives sector in Quebec. It outlines the results of a partnership research conducted with Bibliothèque et Archives nationales du Québec, as well as the results of surveys, focus groups and participant observations with Quebec cultural professionals. What is the specificity of this sector in terms of data practices and data power? We argue that far from the advent of a "data culture" common to all actors, a variety of differentiated "cultures of data" can rather be observed throughout the cultural sector.

These different cultures of data vary according to the specific professional ethos that characterize a cultural sector, the legal frameworks of governance that apply, the position of actors in the professional field, and the funding structure of organizations. In the library and archive sector, on the one hand, we observe that the powerful socio-technical imaginary of big data and algorithmic systems is particularly seductive. But on the other hand, this sector forcefully resists the exploitation of Behavioral data due to strong beliefs in non-commercial and non-discriminatory public service, and a professional tradition of user's privacy protection.

Finally, we offer a critical review of our own partnership research experience. We acknowledge that our research may be instrumentalized to serve community's adherence to an a-critical data culture, while identifying levers for engaging in critical conversations with stakeholders.

- **Data Literacy in Civic Tech: Critical Understandings and Practices of Data in Civic Tech Initiatives**, Alejandro Alvarado Rojas

Abstract: Empowering citizens to participate in the data landscape is increasingly a matter of data literacy. Recent debates of data literacy have expanded beyond techniques of data analysis and management into dimensions of self-reflexive data cultures (Markham, 2020), collective engagement as data citizenship (Carmi et al., 2020), and interpretive acts of data (Fotopoulou, 2021). While these perspectives address critical aspects of data literacy, attending to the precise identification of data literacy practices, their distinction across cultural and institutional contexts, and their mobilization to facilitate public involvement through civic technologies require further elaboration. This study builds on Baack's (2018) application of imagined affordances of data by incorporating the mechanisms and conditions that shape the emergence of data practices in civic technology. Moreover, this framework systematically discerns the co-constitution of data practices and data literacy as critical engagements with civic life. Specifically, a reflexive thematic analysis of 14 semi-structured interviews with civic technologists involved in the use, design, application, and maintenance of data technologies across regions of the Global North and Global South suggests that data practices exhibit key features of data patchworking, mediating accountability, multimodally communicating data, and scaling organizational relations. I argue that these four data practices inform how data literacy is understood and practiced by civic technologists across institutional and organizational experiences where both experts and non-experts comprise civic participatory forms. To conclude, this study traces the interdependencies between contextual dynamics and technical operations that afford data practices in civic technology to advance the conceptual boundaries of data literacy as a critical vessel for engagement with politics of

datafication.

- **Infrastructuring Data Publics: A Case Study of Open-Source Computational Programming Notebooks in Environmental Data Justice**, Alejandro Alvarado Rojas

Abstract: The datafication of civic life results in the proliferation of citizen-generating data initiatives seeking to address public concerns (Balestrini et al., 2021; Milan, 2019). Emerging modes of civic participation complicate the formation of publics where the datafied and algorithmic reconfiguration of the political will of citizens surface issues about recognition – the critical ways in which data bounds real consequences (Hartley et al., 2021; Mörténböck & Moonshammer, 2020). Despite the unwieldy processes of datafication, the rise of open-access computational notebooks as data infrastructures presents experimental forms of recognition by interfacing data relations in the generation of narratives that shape the power of data (Leon, 2021). This project investigates how open-access computational notebooks become data infrastructures for civic participation and thus inform the potential emergence for data publics. Drawing from Marres' (2012) material publics and LeDantec and DiSalvo's (2013) concept of infrastructuring, I examine the sociotechnical processes that condition the formation of data publics around issues of recognition as well as the critical engagement with such conditions. Particularly, the proposed case study attends to the publication of open-source computational notebooks of an environmental data justice working group tasked with tracking watershed levels across the U.S. – the Environmental Enforcement Watch team (EEW). Through a multi-sited technography consisting of interviews, participant observation in online meetings, and close readings of organizational contents, I trace the technical documentation, stories of users and designers of the notebooks, and histories of the datasets sourced to outline the infrastructuring dynamics of the notebook by foregrounding the relations assembled through data. Expected findings illustrate how infrastructuring (re)binds representations and materializations of data publics through computational civic collaboration. In sum, this study demonstrates how infrastructuring data publics underscore the relationality of data and political intentions through the discovery and articulation of data issues in environmental data justice.

Session XIV

Time:	Ottawa 14:35-16:00	Sheffield 19:35-21:00	Bremen 20:35-22:00
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In-Person Roundtable OP3 Canadian Youth & Data Justice (Ottawa)

Readers Digest Resource Centre (chair: self moderated)

- Leslie Shade, Jane Bailey, Valerie Steeves, Karen Louise Smith

Abstract: Data justice is of particular significance for young Canadians, who we define for the purposes of this roundtable as infants to young adults into their 20s. Young Canadians are likely to encounter a range of data injustices within their lifetimes. As young children, many have their lives chronicled on social media by their parents without their consent, and as teens and young adults they are likely to be participants in and contributors to their own detailed social media profile as well as the profiles of others in their social networks. School children may have their academic progress tracked by virtual learning environments operated by big technology corporations. Young peoples' behavioural data are routinely tracked within and across platforms and subjected to algorithmic processing, with the results used to shape online environments (e.g., through targeted advertising). Algorithmic processing in some cases determines access to opportunities (e.g., automated processing of job or university applications). Building upon a range of research projects associated with the eQuality Project, a seven-year SSHRC partnership grant, this roundtable will share insights relevant to instantiating data justice with young people in Canada. Results from various research projects suggest that the contours of data justice are still being formed. Panelists will explore a variety of perspectives and questions. Many conceptions of data justice scaffold

upon old and new data protection principles. For example, do young people provide true informed consent for data collection and processing? Can young people request to delete their data, through their right to be forgotten? Other conceptions of data justice expand far beyond the bounds of data protection. How do young people resist data injustice, and do they have the ability to participate in designing the socio-technical systems that shape their lived and intersectional life experiences?

Conference Organizing Committee

Sheffield University, United Kingdom

Jo Bates

Senior Lecturer in Information Politics and Policy, Information School, University of Sheffield



Jo Bates is Senior Lecturer in the Information School at the University of Sheffield. Jo's research in Critical Data Studies covers four thematic areas: data cultures, data journeys & friction, climate & environmental data, and digital labour. Jo is currently leading the [Patterns in Practice](#) project which explores how practitioners' beliefs, values and feelings interact to shape how they engage with and in data mining and machine learning across science, education and the arts. Other current projects include [Living with Data](#) and Net-zero Data Frictions.

Monika Frątczak

Research Associate, Department of Sociological Studies, University of Sheffield



Monika completed her PhD this year at the Department of Sociological Studies, University of Sheffield. Her research explored emotional responses and (potential) democratic participation through data visualisation about climate change in two different national contexts. She is currently working on the [**Living with Data**](#) project. She has also worked as a research assistant with Ozge Ozduzen [**mapping and visualising inequalities in vaccine hesitancy**](#) and with Chris W Anderson, Giorgia Aiello and Helen Kennedy on '[**Generic Visuals in the News**](#)'.

Ysabel Gerrard

Lecturer in Digital Media and Society, Department of Sociological Studies, University of Sheffield



Ysabel joined the Department of Sociological Studies in September 2017, having completed her PhD at the School of Media and Communication, University of Leeds and spending some time as an Intern at Microsoft Research New England. In addition to her research and teaching, Ysabel is the Chair of the European Communication Research and Education Association (ECREA) Digital Culture and Communication Section (2021-2022), and a member of Facebook's Suicide and Self-Injury (SSI) Advisory Board. She often talks to the press about her research

and has appeared in venues like BBC Woman's Hour, BBC News, The Guardian, The Independent, NBC News, The Washington Post and WIRED.'

Helen Kennedy

Professor of Digital Society, Department of Sociological Studies, University of Sheffield



Helen is Professor of Digital Society at the University of Sheffield where she directs the [Living With Data](#) programme of research. She is interested in how digital developments are experienced and how these experiences can inform the work of digital practitioners in ways that overcome inequalities. She is interested in perceptions of datafication, the possibility of data-related agency, trust, equity, justice, and what ‘the digital good’ might look like. Other current projects include [Generic Visuals in the News](#) and [Patterns in Practice: cultures of data mining in science, education and](#)

[the arts](#). Recent books include *Data Visualization in Society* (Amsterdam University Press, 2020) and *Post, Mine, Repeat: social media data mining becomes ordinary* (Palgrave MacMillan, 2016). A full list of publications can be found [here](#).

University of Bremen, Germany

Juliane Jarke

Senior Researcher, Institute for Information Management Bremen (ifib) & Centre for Media, Communication and Information Research (ZeMKI) University of Bremen, Germany

Starting from the observation that digital technologies are always relational and that through their design, we configure (future) socio-technical relations, Juliane’s research



explores ways in which our socio-digital and datafied futures are made and (can be) re-made in three domains: the public sector, education and demographic ageing. Juliane joined the University of Bremen in 2014 and is co-founder of its Data Science Center. Prior to Bremen, she worked as a research associate at the Centre for the Study of Technology and Organisation at Lancaster University. In 2014, she completed her PhD in Organisation, Work and Technology at Lancaster University Management School. Prior to her PhD studies, she earned degrees in MSc Information Technology, Management and Organisational Change (Lancaster University); MA Philosophy (Hamburg University) and BSc Informatics

(Hamburg University). Since 2009, Juliane serves as an independent expert to the European Commission within the areas eInfrastructures, Data Infrastructures and Digital Science. She co-edited *The Datafication of Education* (with Andreas Breiter, 2019) and *Probes as Participatory Design Practice* (with Susanne Maaß, 2018). In 2020 she published the open access monograph *Co-creating Digital Public Services for an Ageing Society*. Her most recent book is the edited, open access volume *New Perspectives in Critical Data Studies: The Ambivalences of Data Power* (with Andreas Hepp and Leif Kramp, 2022).

Monika Halkort

Senior Lecturer at the University of Applied Arts, Vienna, Austria



Monika's research interrogates the material entanglement of contemporary techno-scientific infrastructures and data practices with colonial knowledge regimes. She just recently took up a position as curriculum developer and senior lecturer for the MA program in Applied Human Rights and the Arts in Vienna, following 10 years of teaching and research at the department of Communication Arts of the Lebanese American University (LAU) in Beirut, Lebanon. Her academic writing traverses the fields of political and moral ecology, feminist STS and decolonial theory and has been published in peer

reviewed academic journals such as the International Journal for Communication, the Canadian Journal of Communication, and Tecnoscienza as well as in edited books, including Mapping Crisis: Participation, Datafication and Humanitarianism in the Age of Digital Mapping, edited by Doug Specht (University of London Press, 2020) and Oceans Rising, edited by Daniela Zyman and Markus Reyman (Sternberg Press, 2021). The main geographic focus of her work is the Arab world and the Mediterranean South.

Carleton University, Ottawa Canada

Tracey P. Lauriault

Associate Professor, Critical Media and Big Data, Communication and Media

Studies, School of Journalism and Communications, Carleton University, Canada



Cross Appointed to [Digital Humanities](#), and is board member of the [Institute for Data Science](#) at [Carleton University](#) in Ottawa, Ontario. Her ongoing work on open data, open government, big data, smart cities, and data preservation is international, transdisciplinary, and multi-sectoral. Her current research interests are in digital twins, data brokers, Indigenous data, disaggregated equity data and data governance. Lauriault is one of the founders of the field critical data studies, open data and Open Smart Cities, AI & trust, taking a data and technology governance approach to the shaping of large complex systems.

As a publicly engaged scholar, she mobilizes her research into data and technology policy across sectors. As a data and technological citizen, she examines large and small data and technology systems with the hope of making them more just, inclusive, equitable and environmentally sustainable.

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