

© Anders Koed Madsen and Anders Kristian Munk 2026

Cover image: Maxim Berg on Unsplash.

Every effort has been made to trace all the copyright holders but if any have been inadvertently overlooked please notify the publisher.

With the exception of any material published open access under a Creative Commons license (see www.elgaronline.com), all rights are reserved and no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical or photocopying, recording, or otherwise without the prior permission of the publisher.



Chapter 11 is available for free as Open Access from the individual product page at www.elgaronline.com under a Creative Commons Attribution 4.0 International (<https://creativecommons.org/licenses/by/4.0/>) license.

Published by

Edward Elgar Publishing Limited
The Lypiatts
15 Lansdown Road
Cheltenham
Glos GL50 2JA
UK

Edward Elgar Publishing, Inc.
William Pratt House
9 Dewey Court
Northampton
Massachusetts 01060
USA

Authorised representative in the EU for GPSR queries only: Easy Access System Europe – Mustamäe tee 50, 10621 Tallinn, Estonia, gpsr.requests@easproject.com

A catalogue record for this book is available from the British Library

A LCCN number for this book is available from the Library of Congress

This book is available electronically in the **Elgaronline**
Business subject collection
<https://doi.org/10.4337/9781802208993>

ISBN 978 1 80220 898 6 (cased)
ISBN 978 1 80220 899 3 (eBook)
ISBN 978 1 0353 8071 8 (ePub)

Editors and contributors

EDITORS

Anders Koed Madsen, Professor, Data, Democracy and Digital Urbanism, Technical University of Denmark

Anders Koed Madsen is Professor of Data, Democracy, and Digital Urbanism at the Technical University of Denmark. His research examines how machine learning applied to large-scale qualitative data can inform policy-making and urban planning in ways that respond to local challenges. Under the concept of *Soft City Sensing*, he has collaborated with urban design firms such as Gehl, Henning Larsen, and BIG. His work combines pragmatist philosophy, computational humanities, internet studies, and organizational analysis. Anders is co-founder of the Public Data Lab, has contributed to networks advancing humanistic approaches to data science, and held visiting positions at Columbia University, Goldsmiths, and MIT.

Anders Kristian Munk, Professor, Computational Anthropology, Technical University of Denmark

Anders Kristian Munk is Professor of Computational Anthropology and head of the Observatory for Human-Centred Engineering at the Technical University of Denmark. His research focuses on the integration of data science and qualitative/ethnographic methods with a particular focus on the analysis of technological controversies in society. He is the co-author of *Controversy Mapping: A Field Guide*, co-founder of the Public Data Lab, and is currently engaged in a range of research projects spanning issues like the green transition, public sector digitalization, and culturally aligned artificial intelligence.

CONTRIBUTORS

Kristoffer Albris, Associate Professor, Center for Social Data Science, University of Copenhagen

Kristoffer Albris is Associate Professor at the Center for Social Data Science and the Department of Anthropology, University of Copenhagen. His main research interests are climate change adaptation, disaster risk reduction, digital methods, and computational ethnography. He is currently the head of studies for the MSc programme in Social Data Science at the University of Copenhagen and a member of the Copenhagen Tech Policy Committee.

Christian Borch, Professor, Department of Sociology, University of Copenhagen

Christian Borch is a professor of sociology at the University of Copenhagen. His current research focuses on the sociology of finance, with a particular emphasis on automated trading. His most recent book is *Social Avalanche: Crowds, Cities and Financial Markets* (Cambridge UP, 2020). He is co-editor, with Juan Pablo Pardo-Guerra, of the *Oxford Handbook of the Sociology of Machine Learning* (Oxford UP, 2023) and is currently completing a new book tentatively titled *Trading Automaton: How Machine Learning is Reshaping Financial Markets* (under contract with Stanford UP).

Erik Borra, Assistant Professor in Journalism and Artificial Intelligence at the University of Amsterdam.

Erik Borra holds an MSc in artificial intelligence and information retrieval; his PhD research focused on the use of web data and new digital research instruments in the humanities and social sciences. Erik is a founding member of the Digital Methods Initiative. In that capacity he has developed dozens of tools to gather, analyze, and visualize web data. His current research is titled ‘Tools of Interpretation: Generative AI as a Mediator in Everyday Epistemologies’.

Samantha Breslin, Associate Professor, Department of Anthropology, University of Copenhagen

Samantha Breslin is an associate professor in the Department of Anthropology and associated with the Center for Social Data Science at the University of Copenhagen. Her research centers the production of norms, values, and inequities in relation to computing and data cultures, with a particular focus on gender, expertise, and labour. Her current research interests focus particularly on the futures which are being built through tech innovation and entrepreneurship.

Hjalmar Bang Carlsen, Associate Professor, Center for Social Data Science, University of Copenhagen

Hjalmar Bang Carlsen holds an associate professorship in mixed digital methods at SODAS, University of Copenhagen. His research and teaching focus is on mixed methods strategies for collecting and analyzing digital data. His substantive research is in political and civic participation on social media.

Gabriele Colombo, Researcher, Department of Design, Politecnico di Milano

Gabriele Colombo is a researcher at the Department of Design, Politecnico di Milano, and a member of DensityDesign Lab. Previously, he was a postdoctoral researcher at the Department of Digital Humanities, King’s College London. He is affiliated with the Visual Methodologies Collective at the Amsterdam University of Applied Sciences. He is the co-author, with Sabine Niederer, of *Visual Methods for Digital Research* (Polity, 2024).

Kenneth Christian Enevoldsen, Postdoc, Center for Humanities Computing, Aarhus University

Kenneth Christian Enevoldsen’s research focuses on natural language processing and representation learning across modalities. He sits in the Open Source committee within the Danish Data Science Community and is the author of multiple popular open-source packages used for evaluation, application, and analysis of natural language tools. These packages have seen popular adoption and have been used to evaluate models by Google, Microsoft, OpenAI, and others.

Martin Grandjean, Senior Researcher, Digital Humanities, University of Lausanne

Martin Grandjean is a Senior Researcher in digital history at the University of Lausanne (UNIL), Switzerland. He holds a PhD in contemporary history and specializes in the study of international organizations, media history, and historical data analysis. He is developing methods for the structural analysis of large archival corpora, and is particularly interested

in the graphic and synthetic representation of this massive data. Currently vice-director of Nucleus, the digital humanities center of the UNIL Faculty of Arts, he has also been a member of the boards of ADHO, centerNet and Humanistica, all of which work to develop the community of digital methods in the humanities.

Johan Heinsen, Professor, Department of Politics and Society, Aalborg University

Johan Heinsen is Professor of Social History at the Department of Politics and Society, Aalborg University. His work focuses on the history of coercion and punishment in early modern Northern Europe. He has led the initiative Historisk Datalaboratorium at Aalborg University, including the creation of research-driven archives, such as Enevældens Aviser Online, which used machine learning to create a text corpus of newspapers from absolutist Denmark. His work employs a wide range of computational methods.

Mathieu Jacomy, Doctor of Techno-Anthropology and Assistant Professor at the Aalborg University Tantlab

Mathieu Jacomy has been a research engineer at the Sciences Po médialab in Paris and is a co-founder of Gephi, a popular network visualization tool. He develops digital instruments involving data visualization and network analysis for the social sciences and humanities. His current research focuses on visual network analysis and irredutionist visualization, digital controversy mapping, and computational social science.

Mascha Kurpicz-Briki, Professor, Data Engineering, Bern University of Applied Sciences

Mascha Kurpicz-Briki is Professor for Data Engineering at the Bern University of Applied Sciences (BFH) in Biel, Switzerland, and co-leader of the research group Applied Machine Intelligence and the BFH Generative AI Lab. Her research focuses on applying innovative technology like machine learning and language models to the fields of health and humanities, and on the investigation of bias in natural language processing under consideration of European languages and values.

Jens Koed Madsen, Assistant Professor, Department of Psychological & Behavioural Science, London School of Economics

Jens Koed Madsen is an assistant professor at the Department of Psychological and Behavioural Science at the London School of Economics and Political Science. He uses a mixture of qualitative and quantitative methods (e.g. interviews, Bayesian modelling, and agent-based modelling) to research the psychology of persuasion and the dynamics of human-environment systems. Centrally, he explores how people form their beliefs about the world, how they handle or integrate new information, and how they use their subjective view to guide behaviours in social and dynamic ecosystems. With the view of how people form and use their beliefs about the world, he researches how this impacts the fragility of information systems, political messaging, and environmental sustainability. His environmental work spans topics like fishing, poaching, and farming, while his work on information systems explores belief revision, micro-targeting, and the impact of misinformation.

Michele Mauri, Researcher, Design Department, Politecnico di Milano

Michele Mauri is a researcher at Politecnico di Milano – Design Department and co-director of the DensityDesign Lab. Within the lab, he coordinates research, as well as the design

and development of projects focused on the visual communication of data and information, particularly those involving born-digital data and open-source applications.

Sharon Meraz, Associate Professor, Department of Communication, University of Illinois Chicago

Sharon Meraz is a computational, quantitative social science scholar, and her work resides in the interplay of political communication, networked journalism, and mass media theory as impacted by emerging social and internet technologies. Meraz has brought a social network analytic perspective to the evolving media ecology, and has worked in extending theories of gatekeeping, framing, and agenda-setting for social media environments in efforts to better explain how political agendas are built in partisan political networks. Meraz employs such methodologies as automated content analysis, natural language processing, and social network visualization techniques, alongside traditional social scientific methods.

David Moats, Lecturer, Department of Digital Humanities, King's College London

David Moats is a lecturer in Digital Methods at the Department of Digital Humanities, Kings College London. He writes about methods in digital social research and also about interdisciplinarity and the impacts of machine learning and artificial intelligence on various industries. He is the co-editor, with Steve Woolgar, Else Vogel and C. F. Helgesson, of *The Imposter as Social Theory* (Bristol UP, 2021) and is currently working on a European project about the relationship between public values and algorithmic systems.

Laura K. Nelson, Associate Professor, Department of Sociology, University of British Columbia

Laura K. Nelson is an associate professor of Sociology at the University of British Columbia, where she also directs the Centre for Computational Social Science. She uses computational methods to study social movements, gender, culture, and institutions, and to advance qualitative computational text analysis methods. She has published in outlets such as *American Journal of Sociology*, *American Sociological Review*, *Sociological Methods & Research*, and *New Literary History*, among others.

Sabine Niederer, Professor, Visual Methodologies, Amsterdam University of Applied Sciences

Dr Sabine Niederer is Professor of Visual Methodologies at the Amsterdam University of Applied Sciences, head of ARIAS platform for artistic research, and co-coordinator of the Digital Methods Initiative at the University of Amsterdam. Together with Gabriele Colombo, she wrote *Visual Methods for Digital Research* (Polity, 2024). With Richard Rogers, she co-edited *The Politics of Social Media Manipulation* (Amsterdam University Press, 2020).

Guillaume Plique, Research Engineer, Sciences Po Paris's médialab

Guillaume Plique specializes in web mining, network theory, and natural language processing. For the past decade, he has built and maintained open-source tools for social sciences research. His notable contributions include Minet, a popular web data collection tool, and Xan, a powerful terminal utility for processing large datasets with limited resources. He has also contributed significantly to web-based visual network analysis projects such as Sigma.js, Graphology, MiniVan, and Gephi Lite.

Nicholas Proferes, Associate Professor, School of Social and Behavioral Sciences, Arizona State University

Nicholas Proferes is an associate professor at Arizona State University's School of Social and Behavioral Sciences. His work focuses on scientific research practices in the context of internet research, users' understandings and beliefs about socio-technical systems such as social media and AI, and societal discourse about new technologies. He has analyzed how scientists are using data from Reddit; users' beliefs about information flow on Twitter; and how tech leaders use strategic language choices to position their technologies in society.

Bernhard Rieder, Associate Professor of New Media and Digital Culture at the University of Amsterdam

Bernhard Rieder is a collaborator with the Digital Methods Initiative. His research focuses on the history, theory, and politics of software and on the role algorithms play in the production of knowledge and culture. This work includes the development, application, and analysis of computational research methods and the investigation of political and economic challenges posed by large online platforms.

Dario Rodighiero, Assistant Professor, Sciences and Technology Studies, University of Groningen

Dario Rodighiero is an assistant professor of Sciences and Technology Studies at the University of Groningen, specializing in knowledge design. His interdisciplinary work bridges art, science, and society, focusing on mapping scientific communities and digital archives. At Groningen, he teaches in the Data Science and Society bachelor program and coordinates the Data Wise minor. Additionally, he is a principal at Harvard University's metaLAB and a faculty associate at the Berkman Klein Center for Internet and Society. Dario holds a PhD from EPFL and authored *Mapping Affinities: Democratizing Data Visualization*, a book about charting scientific communities from a design-driven perspective.

Richard Rogers, Professor, Media Studies, University of Amsterdam

Richard Rogers is Professor of New Media and Digital Culture, Media Studies and Director of the Digital Methods Initiative, Humanities Labs, University of Amsterdam. He is author of *Information Politics on the Web*, *Digital Methods* (both MIT Press) as well as *Doing Digital Methods* (Sage). He is editor (with Sabine Niederer) of *The Politics of Social Media Manipulation* and *The Propagation of Misinformation in Social Media: A Cross-platform Analysis* (both Amsterdam University Press).

Iza Romanowska, Associate Professor, School of Culture & Society, Aarhus University

Iza Romanowska is a computational archaeologist and the principal investigator at the Social Resilience Lab at Aarhus University, Denmark. Her work operates at the intersection of complexity science and the social sciences, with a particular focus on agent-based modelling – a simulation method she uses to explore the complex social dynamics of ancient and modern communities. Her current research leverages archaeological and historical data through modelling to analyze patterns of urban resilience in past societies with a view to contributing critical perspectives to contemporary challenges.

Tanja Schneider, Associate Professor, Science and Technology Studies, Technical University of Denmark (DTU)

Tanja Schneider is Associate Professor of Science and Technology Studies and head of the Human-Centred Innovation section at the Technical University of Denmark (DTU). She is also a research affiliate at the Institute for Science Innovation & Society in the Department of Anthropology at the University of Oxford. Her research is situated at the intersections of science and technology studies and economic sociology/market studies. Tanja's overarching research interest centres on how novel technologies reconfigure agency, accountability, and autonomy in the digital society. Most recently she has studied how digital platforms and devices shape consumers' food and eating-related interests and practices.

Nicholas Skar-Gislinge, Assistant Professor, Copenhagen Business School

Nicholas Skar-Gislinge is an expert in agent-based modeling of financial markets, focusing on how interactions between different market actors affect the market. He holds a PhD in physics from the Niels Bohr Institute, University of Copenhagen, and has been employed as a postdoctoral researcher at Copenhagen Business School and the Copenhagen Center for Social Data Science, University of Copenhagen. As an assistant professor at Copenhagen Business School, he taught Introduction to Algorithmic Trading.

Nees Jan van Eck, Senior Researcher, Centre for Science and Technology Studies (CWTS), Leiden University

Nees Jan van Eck leads data infrastructure projects and coordinates the Information & Openness focal area. Drawing on extensive technical expertise and deep knowledge of diverse scientometric data sources and tools, Nees Jan focuses on studying and developing infrastructures, algorithms, and tools to support research assessment, science policy, and scholarly communication. Nees Jan is the architect and lead developer of the CWTS Leiden Ranking Open Edition, the first fully transparent worldwide university ranking based on open and reproducible data. He is also the developer of VOSviewer, a widely used software tool for analyzing and visualizing bibliometric data, which has been mentioned in more than 50,000 scientific publications.

Tommaso Venturini, Associate Professor, Medialab, University of Geneva

Tommaso Venturini is Associate Professor at the University of Geneva Medialab, researcher at the CNRS Centre for Internet and Society, and founder of the Public Data Lab. He has been a researcher at the École Normale Supérieure of Lyon and recipient of the advanced research fellowship of the French Institute for Research in Computer Science. He has been digital methods lecturer at King's College Digital Humanities Department and coordinator of the research activities of the médialab of SciencesPo Paris.

