

1. Making a Difference: The Epistemic Value of Collaborative Research in a Datafied Society

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Abstract

This chapter addresses the evolving role of academia amidst budget constraints and neoliberal policies, highlighting the growing need for its work to be more socially relevant, especially in the humanities. It argues that academia can actually benefit from moving beyond its institutional walls, engaging with diverse community and civil society stakeholders. Such collaboration enables universities to respond to pressing societal challenges. The chapter explores three primary motivations for increased academic engagement with societal sectors, identified by researchers and university administrators: vocational, educational, and societal impetus, and advocates for a fourth motivation: the epistemic impetus. Collaborative research allows researchers to gather evidence and generate insights to produce knowledge with communities and in context, enriching academic research and allowing interventions and the application of findings.

Keywords: Societal engagement; Data work; Stakeholders; Civil society; Unacknowledged labor

Academia is rapidly changing, struggling with relevance and the need to be more engaged with the community. Also, universities are experiencing significant budget cuts. While austerity measures and neoliberal ideologies have sparked debates about the value of teaching and research, particularly in the humanities, for some time (e.g., Brandt 2011; Collini 2012), university policies increasingly push for greater engagement with social sectors. We

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consider this shift to be positive and timely, given urgent global challenges that research institutions (among others) must address: the climate crisis, pandemics, hybrid warfare, migration, demographic shifts, digitalization including AI, and the platformization of social services to name a few. Here, scientific research and social, technical, and political discourses and public debates align with those of journalistic commentary and advocacy from political groups, industry, and civil society. Reflecting on these intersections, we argue that academia has much to gain by moving beyond its institutional wall, in our case, by doing data work with a community.

The contributors to this book share a specific interest about datafication, knowledge economies and the rise of artificial intelligence (AI). They collaborate with stakeholders across diverse communities and civil society to tackle challenges that address pressing issues stemming from data practices and social justice issues. The chapters also discuss public engagement that extends beyond the scope of traditional science communication, teaching, and the reporting of applied research results. They also constitute transdisciplinary cooperation and mutually generated knowledge with actors outside the university, data work with issue stakeholders, professionals, practitioners, the public and researchers from other multiple disciplines.

Reflecting upon this contemporary context, we identified three main arguments put forth by researchers and university administrators for more collaboration with societal sectors, and we emphasize a fourth:

1. Our expertise is needed (vocational impetus).
2. It provides learning opportunities (educational impetus).
3. We can contribute to shaping society (societal impetus).

The *vocational impetus* acknowledges that research produces knowledge to respond to societal challenges, and for researchers to make efforts to mobilize their findings with specific audiences, and to engage with stakeholders who can build on that expertise. For emerging data and AI practices, this increasingly includes researchers from the humanities and the social sciences (Van Dijck 2017).

The *educational impetus* is about creating learning opportunities resulting from cooperation between universities and civil society. Here, universities find new student audiences, develop community-engaged learning, and provide education for professionals (e.g., UNESCO 2023). The *societal impetus* targets the application of research findings for the benefit of society at large. Utrecht University and Carleton University, among others, have both expressed these sentiments in their mission statements: “Utrecht University

is working to create a better world” (Utrecht University 2020) and “connect and partner with community and businesses to advance excellence in research” (Carleton University 2024).

However valid such motivations are for encouraging and intensifying collaboration between academia and society may be, they typically imply the view that knowledge originates within academia and is then distributed to society as a whole. We, however, propose an additional motivation: the *epistemic impetus*. This epistemic impetus extends the capacity to gather evidence and arrives at insights to produce knowledge with community and in context.

Datafication, we suggest, also provides researchers and community with new data resources, including advancements in computational or digital methodologies, allowing for new possibilities to generate and access new kinds of empirical evidence which had previously been out of reach (Van Es and Schäfer 2017). New data and computational approaches necessitate different kinds of interdisciplinary collaboration, to jointly refine knowledge about the impact of data on our lives, work, politics, and culture. Collaborative research that actively engages with society not only taps into the intrinsic motivation for knowledge discovery – the *epistemic impetus* – but also increases opportunities for professional and educational growth which, in turn, supports a broader commitment to the *societal impetus*.

Doing Data Work

The emerging field of critical data and AI studies has provided a much-needed correction with regard to the objectivity claims made in the overly optimistic discourse of Big Data (e.g., boyd and Crawford 2011; Iliadis and Russo 2016; Richterich 2018; Kitchin and Lauriault 2022) and is aligned with a similar critique of AI (e.g., Broussard 2018; Crawford 2021; Buolamwini 2023). Collaborative research in this domain not only facilitates the collection, presentation, and discussion of empirical evidence to support this critique but also actively enables education, intervention, and transformative change in data, AI, and social-technical processes.

Collaborative research practices, involving colleagues from various disciplines with practitioners and issue specific stakeholders, aim to explore opportunities for the in-depth study of social and technological transformation. Collaborating with stakeholders and the co-creation of research leads to insights beyond the typical distant gaze of traditional academic research. This form of shared inquiry also addresses issues, problems, and challenges

often overlooked and willfully ignored. This may involve reexamining labor practices and organizational structures, governance, developing data literacy and the co-creation of datasets to name a few. This is what we call *data work*.

Data work includes meticulous and labor-intensive efforts along the data value chain: capturing and annotating data; compiling datasets; storing, retrieving, and processing data; as well as visualizing and publishing data. Additionally, the concept accounts for the social and local contexts within which data practices occur. Data work here is about the detailed, socially conscious effort to counter the often unsubstantiated promises associated with big data. Collaborative research projects in this area facilitate and advance data work efforts, enabling effective knowledge transfer and interventions. They also benefit the research methods, as researchers develop the capacity to count, measure, and record events or phenomena previously not available as data. Unlike easily available records, which may be of lesser quality in representing phenomena but make up what has widely been called “Big Data,” this kind of data work also represents “real social analytics” (Couldry et al. 2016). Furthermore, the close study of a phenomenon enables critical examination of the indicators used to score individuals, a practice central to many reported cases of algorithmic harm. Collaborative research with knowledge experts beyond the academy brings us closer to the actual phenomenon, putting all in a better position to engage in “data point critique” (Gerlitz 2017). This is connected research that responds to societal needs and urgencies, most especially datafication and algorithmic issues that affect local, social, and organizational data and technological contexts (e.g., Loukissas 2019).

Shifting Academia

Universities are struggling for social relevance, to be more open and inclusive, and wanting to be oriented toward addressing societal issues. We also see scholars and administrators increasingly participate in public debates, influence policy decisions, and create educational outreach programs. Further, there is also the move toward the mobilization of scholarly knowledge beyond the academy. This has long been subject to criticism, in some cases critiques that universities have become more commercial and are limiting academic freedom, stifling methodological rigour, and cutting costs (e.g., Slaughter and Rhoades 2000; Bok 2003; Ostrom 2007). Indeed, applied research and life-long learning have become the hallmarks of neoliberal

policy to serve the research-and-development (R&D) and the human-capital demands of corporations. The aim of demonstrating value to society has fuelled new managerialist outlooks, such as impact agendas (Holbrook 2017). We and the authors of the chapters in this book, on the other hand, argue for a different type of impact and engagement, by providing examples that make a difference in the datafied society. Approaches discussed in this volume not only facilitate applied data research but also enrich fundamental research by providing new insights and perspectives. We embrace the power of collaborative, societally engaged, and impact-focused research as part of the *epistemic impetus* that has social and technical relevance.

Through collaborative research, universities can advance the *educational impetus* as they involve students in research activities, who often become professionals who continue cooperating with researchers, and actively inform public policy and provide applicable real-world solutions to the datafied society (Lauriault, Leonne and Ivanoff 2021; Schäfer, Van Es, and Muis 2023). In other words, doing data work helps develop highly qualified personnel for social good – the *vocational impetus*. We align with the recently broadened understanding of open science as being research practices beyond open data and open publishing (Miedema 2022). Through enlarging the field of data work with a holistic understanding of open knowledge production processes with stakeholders from societal sectors and with those experiencing social and economic exclusion or societal harms, our research activities become meaningful and engaged data work.

Collaborative research considers the expertise found among stakeholders and their respective societal sectors and communities. Changing research practices, as described here, allow researchers to immerse themselves in specific societal sectors and communities under investigation and to study phenomena up close with local experts. The practices discussed here extend beyond participatory observation: they are forms of action research, where scholars, practitioners, and the public shape the research questions and methods and do data work together to address immediate issues, achieving results that could only be realized in multi-sectoral teams (Cizek and Uricchio 2022; Dwivedi 2024). Collaborative research here is rooted in disciplinary training, but it unfolds in interdisciplinary and even transdisciplinary research projects; it takes different manifestations of expertise into consideration and is driven more by the current urgencies and needs felt in particular societal sectors than by the inner, often self-referential discourses of academic sub-disciplines and associations. This approach represents a significant shift from focusing on highly individualized academic achievements to valuing collective work.

Researchers from different disciplines collaborate with practitioners or stakeholders to conduct a research project. In such collaborations, the distinctions between participants outside of the university, academic researchers, and support staff often blur in favor of a cooperative effort. These are historically informed and situated perspectives of cultural complexity that are socially dynamic, involve public discourses and aesthetics, and require the integration of the humanities and the social sciences (Van Es and Schäfer 2017). This also means that research will develop directly with events unfolding within particular societal or community contexts. While we do not argue that “pure science” will or should be replaced, we do however think that this kind of data work invites humanities researchers, social scientists, and data scientists to alter their modes of research.

In *Changing Cultures in Higher Education*, Tony Bates (2010, 22) quotes a vice chancellor’s metaphor to describe universities’ resistance to change: “Universities are like graveyards. When you want to move them, you don’t get a lot of help from those inside.” Such resistance is not limited to “pure scientists” who would prefer to continue not to reward, or even acknowledge, individual academic labor being performed outside the norms of the peer-reviewed publication or grants. When universities decide to collaborate with partners outside the university, and have their researchers engage with publics outside of the reigning academic discourse to educate audiences other than the traditional student cohorts, data work profoundly changes. These changes are as much epistemological as they are administrative challenges.

As interdisciplinary and even transdisciplinary research practices become more relevant, academic institutions should reconsider how initial disciplinary training and the subsequent inter- and transdisciplinary collaboration will be ensured. This shift requires the additional education of researchers in neighboring disciplines, the development of skills for working in mixed teams, and the need to listen and understand different perspectives. It raises questions about the rather monolithic organization of universities into departments defined by disciplines, a structure that often seems to stifle collaboration between disciplines rather than stimulating it.

With regard to operations, universities need to expand their research support offices. Up to now they have catered to the traditional research grants distributed through national or supranational funding organizations or various foundations. Legal advice, expertise in contracting, project management, data sharing agreements, progressive data and technology procurement, and corporate communication are usually underdeveloped in supporting collaborative research projects with stakeholders or funders

other than with traditional funding organizations. If such knowledge is present, it mostly relates to joint projects with large corporations. As many of the chapters in this book demonstrate, incredibly relevant work is done with small and local organizations and communities.

Aside from the absence of suitable policies, engagement guidelines, and essential support infrastructure, the primary barrier to collaborative research is the lack of recognition and rewards given to do this sort of work. University administrations may claim the contrary, but traditional incentives remain prevalent within academic institutions. These incentives primarily benefit the individual researcher, typically a full professor supported by a postdoctoral fellow and several PhD students. In evaluations and considerations for potential promotions, the metrics that carry weight include the publication of peer-reviewed papers, the acquisition of grants, the quantity of supervised and successfully defended dissertations, and, occasionally, public visibility through television appearances or op-ed contributions in newspapers. There are very few formal incentives for researchers to go out of their way to build a network with partners outside the university, to engage in the challenging process of interdisciplinary collaboration, to meticulously review results for practical problem-solving and application, to involve their students in field research experiences, or to develop innovative educational formats for professionals encountered in the field and with government.

This book identifies various challenges in the domain of collaborative research. Despite these obstacles, as the examples presented here demonstrate, many have successfully engaged in collaborative research, gaining insights they could not have captured otherwise, intervening effectively in society, providing much-needed data work, and enabling others through it, and taking part in shaping the digital society.

Our aim with this contribution is to facilitate connections among colleagues across different disciplines who are already involved, in some capacity, in similar research efforts. We hope to inspire others who are addressing issues relevant to current societal challenges, and those compelled to interact with stakeholders and audiences beyond the academic sphere, by providing them with practical guidance on practices and methods for setting up collaborative research projects, and to lead scholars in new directions. Finally, we want to inform university policymakers about the challenges posed by collaborative research, encouraging them to design policies that support these endeavors and appropriately recognize and reward the efforts and accomplishments of university faculty and employees involved in such work.

Collaborative research fosters practices, strategies, and tactics that effectively address the challenges of doing this type of research. These approaches can inform university policies and shape the training of scholars to respond appropriately to these challenges. We suggest that the collaborative research not only exemplify the four impetuses – vocational, educational, social, and epistemic but also fall into two broad objectives:

1. Making visible and acknowledging forms of (academic) labor, valid research, and teaching efforts which are widely marginalized.
2. Highlighting exemplary practices, activities, and methodologies that respond to the shift of academia towards intensified societal engagement.

This book provides insight for universities to be more closely linked with public debates, societal needs, and pressing issues in spite of the fact the lack of their institutional infrastructure to effectively support this type of public engagement and collaborative research.

Overview of This Book

This book provides examples of collaborative research that address the consequences of datafication, and excellent examples of doing data work. These research activities are inherently interdisciplinary and multi-sectoral that includes the expertise of practitioners, stakeholders, or the public. Chapters include practices that respond to urgencies within the social sector or communities by researchers and facilitate mutual knowledge transfer. They also take into account situated knowledge and practices rather than prescriptive analysis from afar, as here research outcomes are co-created with stakeholders.

These efforts align with the emerging ambitions of universities to become more inclusive, acknowledge diversity, expand their curricula, and develop community-engaged learning. The activities described incorporate such practices naturally. The contributors to this book are developing new forms of data informed interdisciplinary inquiry and are re-shaping the discourse of datafication and doing data work.

The book is divided into two parts. Part I includes theoretical perspectives and position statements towards the development of evidence-based and impactful collaborative research from different universities and in diverse societal contexts. They emphasize cooperation with external partners and how these processes affect and shape their research. Drawing from their

experience, they address the limitations imposed by how academic research has typically been organized and point to necessary changes to normalize these activities in academic institutions.

Part II presents ten case studies. Here we selected novel data work practices that engage with stakeholders, collaborate with partners outside the university, and use knowledge resources beyond traditional institutions. More importantly, we sought insightful discussion about the tactics, resources, and skills necessary to conduct this type of datafied society research. Many of these case studies demonstrate a commitment to improve the situation of people in the contemporary digital society, to develop novel didactic knowledge transfer processes, and, most importantly, to apply academic labor to societal sectors. This includes case studies that provide clear evidence of societal impact, characterized by successful knowledge mobilization and collaboration with partners outside the university. We hope these case studies inspire others and serve as models to establish new forms of data work research initiatives.

Theoretical Perspective and Position Statements

Part I begins with two chapters that address roles where scholars are neutral observers or active agents of change and discuss questions pertaining to academic neutrality and independence. In the chapter “Performing Critical Data Studies from the Inside: Working with Government to Change Data Regimes,” Rob Kitchin revisits the work he and his team have done cooperatively with government to change data regimes. He argues that academics should operate beyond the boundaries of their individual disciplinary contexts and actively engage with relevant problems. Drawing from almost two decades of research, the chapter demonstrates that active engagement in society and working with those who have an insider position is often the most efficient way to develop relevant policy, shape government programs, and build mutually beneficial infrastructure. In their chapter “Confronting Politicized Research: The Case for Reflexive Neutrality,” René König, Payal Arora, and Usha Raman provide a way forward with the concept of reflexive neutrality that strikes a balance between the so-called “neutral” researcher and the counterproductive activist researcher. Referring to Pielke’s notion of the researcher as an honest broker of different policy options, they propose reflexive neutrality as a process by which researchers acknowledge their sociopolitical embeddedness while formulating evidence-based results from their analysis.

The next set of chapters reflect on applied research, methods of collaboration, and the relationship between research, teaching, and society. In his chapter, Mirko Tobias Schäfer introduces entrepreneurial research as a distinct method to investigate data practices and AI in their social contexts. Using entrepreneurial activities, he argues, allows researchers to immerse themselves in specific societal sectors to arrive at privileged insights to create learning opportunities and possibilities for intervention. Referring to examples from the work done at the Data School at Utrecht University, Schäfer points to the challenges and opportunities emerging from such an approach. Subsequently, in “Open Government Partnership: Balancing Expertise, Practice, and the Academy,” Mary Francoli and Daniel J. Paré explore the professional benefits and the challenges they encountered in their data-focused policy work for, and engagements with, the Open Government Partnership. They argue that applied research nurtures and enriches service, scholarship, and teaching, yet they find that the value and merit of such work is often not recognized in academia. Their chapter formulates concrete measures at institutional and individual levels. In their chapter “The Challenge of Addressing Subjectivities through Participatory Action Research on Datafication,” Katherine Reilly and Maria Julia Morales write about data audits as a mode of participatory action research. Drawing from various research projects, they argue that general data literacies fall short, and suggest that making a meaningful difference requires active participation in reviewing and situating data within affected communities. Their chapter also connects critical data studies to participatory action research to demonstrate how the involvement of researchers and citizens in actual data projects might lead to improvements in data literacy, citizen agency, and research quality.

Case Studies: Do Try This at Home!

In part II authors provide ten case studies clustered around three themes: (1) accountability and policy work; (2) data work and literacy; and (3) collaborative practices. Part II starts with cases concerning the building of infrastructure for accountability and informing policy. “Community Responses to Family Violence Policy” describes the collaboration between public management employees and researchers to chart how public awareness and the understanding of family violence has changed over time in response to public interventions and policy using novel data analysis techniques. Anthony McCosker, Jane Farmer, and Arezou Soltani Panah also reflect on

the quality of the collaboration, the motivation behind their joint research approach, and its outcomes.

“Data Against Femicide” provides a detailed account of the process and impact of feminist participatory approaches that place technology development and data science in the service of activists and social movements. In their mixed team of activists and researchers, Helena Suárez Val, Catherine D’Ignazio, and Silvana Fumega developed practical tools to collect evidence about femicide from media reports in Latin America. These tools made femicide visible and became a call to action to authorities, who had been neglecting available evidence and also ignored an entire category of criminal activity.

“The Fairwork Project: Promoting Good Labor Practices in the Digital Platform Economy through Action Research,” by Tatiana López, Funda Ustek Spilda, Patrick Feuerstein, Fabian Ferrari, and Mark Graham, introduces a method to tackle information asymmetries in the platform economy that construct and conceal exploitative labor relations. The authors provide critical insights into the challenges of conducting action research in the gig economy with regard to maintaining the independence of the research process and its findings. In “Advancing Equity through Data Practices” from Equity Ottawa, a program working to advance the integration of immigrants in Ottawa, Canada across a multi-sectoral partnership, Muna Osman and Hindia Mohamoud explain how the project supported processes of organizational change at the intersection of equity and the datafication of public institutions. This is data work that also reflects upon successes, challenges, and next steps.

Attention then shifts to cases that empower through data literacy. In “Advancing Critical Data Literacy through Justice-Focused Research,” Savannah Hunter, Lindsay Poirier, and Nicholas Shapiro report on a project that uses open government data to explore Occupational Safety and Health Administration violations in US prisons and detention centers. They reflect on how the project, involving various faculty members and (under)graduates, advanced critical data literacy education for students, and they consider the challenges involved in this sort of multidisciplinary collaboration.

Acilon H. Baptista Cavalcante and Ana Claudia Duarte Cardoso then offer insights from the Data Firme project in their chapter “Empowering Citizenship through Academic Practices.” Using Design Thinking, they discuss how academics co-created media practices with young residents from Terra Firme, a neighborhood in the Brazilian city of Belém, to counter representations of that area in the mainstream media and to strengthen a civic media network. Their contribution reflects on the academic challenges of a project built in collaboration with the community.

Jonathan Gray, in “Speculative Data Infrastructures: Prototyping a Public Database on Corporate Tax Avoidance,” explores three ways to workshop “data-in-the-making.” These workshops critically engage with “Country-by-Country Reporting” (CBCR) data. In organizing collaborations with data and offering a generative format, they promote collective learning and interpretation among researchers, teachers, students, and activists. In what follows, “The DataWorkplace: Collaborative Learning about Datafication in Local Government” offers insight into data work between a university and local and regional governments around how these organizations adapt to data practices and AI. Krista Ettliger, Mirko Tobias Schäfer, Albert Meijer and Martiene Branderhorst then reflect on transdisciplinary research as a means to tackle such complex problems. Next, in “You Will Be Assimilated,” Daan Kolkman discusses his own experiences conducting ethnographic fieldwork about data professionals and the algorithmic systems they helped create. He reflects on navigating the challenges to negotiate access, establish rapport, and develop expertise. Additionally, he considers the implications of his gradual transition from an outsider to an insider’s role regarding research integrity and established academic practices of rewards and recognition. Finally, in “Lessons Learned from the eQuality Project,” Valerie Steeves reports on an interdisciplinary and intersectoral project concerned with creating knowledge about young people’s lived experiences of privacy/surveillance and equality in networked space. She discusses the benefits and challenges encountered in a partnership approach to research.

Taken together, the book’s chapters formulate relevant concepts for grounding societally engaged research in the theories and methodologies from different disciplines. Their authors also redefine what is commonly understood as academic research, and they make unacknowledged academic labor and data work explicit. They advocate for urgent changes to be made to the traditional organization of universities, marked by the latter’s counterproductive distinction between research and support staff; insufficient support infrastructures for community-engaged learning and the co-creation of research with stakeholders and partners outside the university; their neglect of societal impact work; and the hesitancy of their commitment to inter- and transdisciplinary collaboration.

In the afterward, Ben Peters considers practice as theory that matters. He strongly argues that we revisit our research priorities and embrace collaborative research as a means forward so that the inherent drive of fact-finding and world-understanding can be combined with developing capacities for actually making a difference.

In summation, we seek, with this book, to highlight the unique knowledge gained through collaborative research, which provides empirical insights that may be challenging or impossible to achieve through other methods. Besides generating practical outcomes, educational frameworks, and sustainable knowledge exchange between academia and society more broadly, collaborative research emerges here as a highly beneficial and essential practice for our knowledge-driven and datafied societies!

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