

2. Performing Critical Data Studies from the Inside: Working with Government to Change Data Regimes

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Abstract

This chapter considers the role of academics in society and to what extent they should seek not simply to produce knowledge about the world but to change it. The chapter argues that academics should operate beyond the academy, proactively engaging state, industry, and civic society organizations to enact progressive interventions. It contends that the most effective way to achieve such interventions is to occupy insider positions that directly contribute to the formulation of policy and the development of programs and infrastructures. The case is made by reflecting on nearly two decades of applied action research, working with state agencies and government departments to try to change data policies and practices and to build data infrastructures.

Keywords: Critique; Advocacy; Action research; Positionality

Introduction

There is a long-standing debate in the social sciences concerning the relevance, purpose and practice of academic research (Mouton and Marais 1988; Fuller and Kitchin 2004a; Bastow et al. 2014). The dynamics in these debates largely hinge on beliefs regarding the extent to which: (i) research should simply produce knowledge about the world or, alternatively, should actively seek to change it; and (ii) academia should work with and for state and industry actors. Some would hold that the academy should produce

impartial and independent knowledge, with researchers' personal politics left at the university gate as they conduct objective and neutral research and act in a value-free manner. In this view, academia is to produce independent, objective, and impartial assessments of society and to set out the pros and cons of policy options that enable others to evaluate such assessments and make their own decisions (Mouton and Marais 1988; Kitchin 2015). In other words, scholars produce knowledge and suggest possible ways to respond to their findings, but it falls to others to evaluate and apply such knowledge in practice. This position does not preclude conducting commissioned research on behalf of state and industry actors; however, such research should be objective, impartial, and non-prescriptive.

In contrast, the post-positivist social sciences hold that it is impossible to produce truly independent and impartial knowledge; the work of an academic, and of the academy more broadly, is always political (Rose 1997; Fischer 2005). These inherent politics, rather than being denied, are mobilized within academic endeavor (research, teaching, publishing, external service) to actively seek change in society. For some, change is sought principally through critique, which assesses and appraises the work of the state and of industry, which are held accountable for their expressions of power and structural violence (Mitchell 2004; Allen 2011). Here, the academy is necessarily separate from the state and industry (Allen 2011), ensuring its critical distance, independence, and scientific autonomy rather than being co-opted into and legitimizing state and industry actions (Wilton 2004; Allen 2011). For others, critique is not a sufficient intervention in the process of seeking change. Those holding this view propose that academics work with civil society organizations and local communities, performing action research, formulating and promoting policy alternatives, and undertaking advocacy and activism (Fuller and Kitchin 2004b). Such activity can include direct work with state and industry actors, even though they may hold different views and aspirations, seeking change from within. The latter approach has become more popular in recent years given the prevalent impact and engagement agenda, along with the pressure being exerted by government policy and by funding agencies demanding that the academy produce work with instrumental value (Bastow et al. 2014).

This variance in the understanding of the politics, praxes, and purposes of academic endeavor is partially encapsulated in Michael Burawoy's (2005) taxonomy of social science research. Burawoy argues that there are four main orientations and praxes of social science, which are defined principally through the form of knowledge produced (instrumental or reflexive) and

the intended audience (academic or extra-academic). Independent research, of the supposedly value-free and neutral variety, as well as the sort that engages in critique and advocates for change, is largely subsumed under instrumental and reflexive knowledge. In contrast, research produced for an extra-academic audience is more applied, engaged, and action-oriented. Of course, the production of reflexive knowledge can be translated into instrumental insights, and work produced for academic peers can be recast to suit extra-academic audiences, and vice versa. An academic can certainly undertake research that fits each category: that is, it is wholly possible to produce instrumental and reflexive knowledge for academic and extra-academic audiences. For example, over the course of my career, I have produced instrumental knowledge for an academic audience, but I have also conducted applied and policy work for an extra-academic audience, produced reflexive knowledge that is highly critical of the state and industry, worked on participatory projects with community groups, and produced public scholarship (blogs, social media, print and online media) aimed at influencing public opinion.

Table 2.1. Forms of knowledge production and praxis (framed with respect to Geography)

	Academic audience	Extra-academic audience
Instrumental knowledge	<i>Professional Geography</i>	<i>Applied (Policy) Geography</i>
– Knowledge	Theoretical/empirical	Concrete
– Legitimacy	Scientific norms	Effectiveness
– Accountability	Peers	Clients/patrons
– Pathology	Self-referentiality	Servility
– Politics	Professional self-interest	Policy intervention
Reflexive knowledge	<i>Critical Geography</i>	<i>Participatory and Public Geography</i>
– Knowledge	Foundational	Communicative
– Legitimacy	Moral vision	Relevance
– Accountability	Critical intellectuals	Designated publics
– Pathology	Dogmatism	Faddishness
– Politics	Internal debate	Public dialogues

Source: Adapted for Geography by Kitchin et al. (2013) from Burawoy (2005)

Critical Data Studies (CDS) makes data and its framing, production, and use its core conceptual, analytical and empirical focus (Dalton and Thatcher 2014). The “critical” aspect in its name refers to the adoption of a perspective rooted in critical social theory. CDS does not regard data or data work as commonsensical or take them at face value (Kitchin 2022).

Rather than data being understood in essentialist terms (natural, benign, representative), abstracted from the world in neutral and objective ways subject to technical constraints, data are understood to be *produced*; that is, they are generated within and reflective of socio-technical contexts. Data are not simply waiting to be collected; they do not exist before they are generated (Markham 2017). Data are the product of discursively framed and technically mediated processes as shaped by protocols, organizational processes, measurement scales, categories, and standards that are designed, negotiated, and debated (Kitchin 2022). Similarly, the entirety of the data lifecycle (generation, handling, processing, storing, sharing, analysis, interpretation, deletion) is socio-technically mediated and saturated with politics. So, too, are the production and operation of data infrastructures and the many ways in which data are used (Leonelli et al. 2017). CDS, then, reflects on philosophical concerns relating to data and their use, and it asks political and ethical questions so as to reveal what is really at stake in data-driven systems and regimes (Kitchin 2022). As such, the majority of endeavors in CDS research are reflexive and academic (critical), though a reasonable proportion of them are instrumental and extra-academic (applied), and some are reflective and extra-academic (participatory). In contrast, research in Data Science is dominated by instrumental and academic (professional) and instrumental and extra-academic (applied) endeavors.

My own CDS research has predominantly been critical and applied rather than professional or participatory/public. I would consider myself a post-positivist scholar who seeks to change the world in proactive ways. My work is political and pragmatic; it engages and works with public and civic stakeholders and is aimed at multiple audiences. Consistently critical, it is also applied work, seeking to formulate and shape public policy and practice and to help build public data infrastructure. At times, it is participatory and activist or takes the form of advocacy and public debate. Over the past twenty years, I have enacted this multifaceted approach with respect to state data and associated data assemblages and infrastructures in Ireland. In what follows, I focus on work relating to planning and development, discussing three projects (All-Island Research Observatory, the Programmable City project, and the Building City Dashboards project). I have undertaken similar work related to culture and heritage as a co-principal investigator for the Digital Repository of Ireland, as well as to the qualitative social sciences as a co-principal investigator of the Irish Qualitative Data Archive and as a participant in the open data movement more generally.

Performing Critical Data Studies from the Inside

My research related to data is premised on the assumption that the best way to enact positive progressive change is not to produce knowledge and leave it to others to convert such knowledge into necessary action, but rather to seek the desired outcome proactively. However important critical analysis for a mainly academic audience may be in terms of generating fundamental insights and informing praxis, its impact beyond the academy is usually limited if it is not accompanied by translational praxis work. If one really wants to influence how the state deals with a phenomenon, the optimal approach is to directly contribute knowledge, ideas, potential solutions, and resources (e.g., time, energy, networks, institutional capacities, reputation, etc.). If one regards a new policy to be necessary, then the way to push it onto an agenda is to be an advocate and to lobby for its creation. If one desires a particular policy formulation, it is best achieved by being involved in its creation. The mere existence of a policy does not mean that all will welcome and implement it, so if one wants to ensure its adoption and a desired impact, then advocacy work needs to be undertaken to persuade others to engage and implement its core principles and practices. If one believes that data practices and management need to be updated or rethought, then offering constructive feedback on better alternatives, or facilitating scoping workshops, or delivering training for staff, will help shift embedded thinking and processes in new directions. If one wants to support the creation of a data infrastructure and seeks it to possess certain qualities and capacities, then the best means of ensuring its production is to be part of the development team. In other words, the best way to effect the desired change is to gain an insider position.

A cynic might argue, with some justification, that this approach assumes that all academics can leverage enough power to exert sufficient influence to change the status quo. Certainly, well-established academics with a strong research and publication profile might have sufficient social capital and a high enough public visibility to be consulted on issues at a national or international scale. They might have sufficient capital to mobilize institutional and network resources that will open doors of their choosing and build relationships and goodwill. The majority of academics, however, have less clout and reputation to gain insider status; to do so requires work and its development will be gradual. The key is to start locally, with a realistic goal and a contribution that is meaningful and sustainable (in terms of time, resources, knowledge, ideas, and continued engagement over a span of years). Organizations at a local scale looking for informed help

and resources are keen to form partnerships and extend networks. Often seeing academics as useful allies, they appreciate the reputational effect of having university involvement in their initiatives as well as the potential access to shared resources through collaborative funding applications. Successful work at a local level tends to gain the attention of stakeholders at the next scale, with project work, “grey” publications, events, media work, and networks providing a means to cultivate relationships and develop sufficient capital to move up into a new position. Delivering on promises and building networks are vital to gain trust and new openings. Even if one stalls at a particular scale, one might hold a reasonable degree of sway at that level. I have followed this ladder route, starting by working with local authorities and civic organizations and then progressing upwards, eventually serving on national-level advisory boards (e.g., Data Forum, Dept of Taoiseach [Prime Minister]; Census Advisory Board; board of the Irish Research Council; National Consultative Panel on Open Data) and working with government departments and state agencies.

AIRO, a joint venture between Maynooth University and Dundalk Institute of Technology, was founded in 2005 as a means to produce harmonized cross-border datasets spanning the Republic of Ireland and Northern Ireland (see chapter 7 of Kitchin 2021). In the wake of the Good Friday Agreement and the peace process in Northern Ireland, cooperation between public sector bodies in the North and the Republic, including shared infrastructure and development plans, had increased enormously. However, there was a dearth of evidence that might underpin these endeavors and little activity to resolve the lacunae. Given animosity between political parties, the difficulty of organizing cooperation between public bodies in different jurisdictions, and entrenched statistical systems and geographies, the most viable solution was the creation of an independent third party to investigate possibilities for creating cross-border data infrastructure, including interactive data tools, for the planning, assessment, and tracking of cross-border developments. AIRO proposed to become that third party, with the Special EU Programs Body (SEUPB) providing the initial funding (€68,000). It was hoped that AIRO would be able to leverage the established applied GIS expertise and networks of its principal investigators to tackle the challenge.

While much of the project tasks were technical, a substantial aspect of the project work consisted of outreach and negotiation with stakeholders to convince them to work with the project and to embrace its vision and ambitions. Much of this advocacy work was highly political given the political sensibilities of key stakeholders concerning cross-border cooperation. It required the project team to act as mediators, to broker relationships, and

to lobby stakeholders and demonstrate the potential benefits and paths to achieving them. The team organized several events and bid for research contracts relating to data on both sides of the border and used these to further the cross-border data agenda. The project was also an early advocate of open data, insisting that the datasets and tools it had built for stakeholders were made openly available. Out of its small initial grant, AIRO built a sizable network of allies and a reputation for creating datasets and tools for evidence-informed policymaking, and it has subsequently undertaken work for all the local and regional authorities in the Republic and several in the North, as well as government departments and state agencies. It has placed researchers into state organizations to help develop their data practices and infrastructures along with their capabilities for data analytics and data-driven policy (see Gleeson et al., 2022). While remaining independent, it works closely with stakeholders to shape the Irish state's data regime. It can act in this way because it has worked hard to gain a trusted insider position. Nonetheless, much of what it advocates for remains unrealized given inertia and competing interests. In this sense, ongoing advocacy and change management work are always in play.

AIRO also provided part of the platform for splinter initiatives such as The Programmable City and Building City Dashboards projects. The Programmable City project, funded by the European Research Council, was principally concerned with undertaking a critical assessment of urban digital technologies and their use in city management and governance. This initiative included a focus on the production and use of open and proprietary data, as well as the deployment of data-driven systems. The project was to incorporate interviews with key stakeholders and ethnographies of smart city initiatives. Early in the project (2013), I was asked to join the steering committee of Dublinked, Dublin's open data repository, which was being jointly developed by the four local authorities and Maynooth University. In 2015, Dublinked was folded into the newly created Smart Dublin, a body for promoting smart city endeavors in the city, with the existing steering committee staying in place. In 2014, supplemental funding from Science Foundation Ireland initiated the production of a city dashboard for Dublin, to be developed in conjunction with Dublin City Council and leveraging foundational data auditing, collation, and visualization work by AIRO. The politics and praxes involved in the unfolding of this project are detailed in Kitchin et al. (2016). The project also aided Smart Dublin in some of its work by organizing and facilitating workshops to scope out the city's smart city vision and agenda. Later work prompted and helped develop its ethics approach to smart city technologies. In exchange for its contributions of

time, expertise, and resources, the project also gained access to key personnel for interviews. In fact, no exchange of funds ever took place between the university and the local authorities; the aid was mutual and *quid pro quo*. Through my involvement in the steering committee, the project's contribution to Smart Dublin, and the development of the city dashboard, I was able to occupy an insider position, directly contributing to open data and smart city policy and to the development of a data infrastructure. In 2016, Science Foundation Ireland funded the Building City Dashboards project that extended the dashboard partnership to include two local authorities in Cork and two state agencies (the Central Statistics Office and Ordnance Survey Ireland, the national mapping agency).

In these projects I, and others on my teams, have moved to varying degrees into insider positions. We have not simply been providing a research service, but have contributed to governance, policy formulation, agendas and visions, and the scope and workings of projects. Importantly, my work with the government has not been to do what they want or to say what they want to hear. I am supportive when support is merited, but I will also stick to principles, debating an issue and arguing a case, and being contrary when necessary. In contrast to my initial expectations, I have found that politicians and others in the public sector are fine with critical voices and robust discussion as long as this sort of engagement is backed with rhetoric and evidence, is constructive and fruitful, and their overall agenda is advanced. They are well used to internal debate and spats between colleagues and among cliques, and they have been subjected to public critique through the media. They are used to evolutions and mutations in the formulation of policy and its implementation, to the political context being relatively fluid, and to certain issues being politically hijacked. Nonetheless, critique and robust exchange can lead to some difficult situations if a partner is losing face or does not want to change the approach or if neither party wants to compromise. At the same time, the discernment of knowing which battles to fight and when to make a tactical concession or retreat is important. To continue to influence plans, decision-making, and actions, I want to stay inside the system rather than be frozen out. I am therefore prepared, as part of a longer game, to tolerate approaches, decisions, and policies that I think are suboptimal or regressive. This long-game orientation requires committed involvement over several years. My strategy is to put my opposition on the record through publication (meeting minutes, social media, blog posts, media interviews, academic articles) while not making a given matter a do-or-die issue. Such pragmatism will not suit all academics, who might feel that it would overly compromise their integrity, independence, and

impartiality. Ultimately, I feel I am more likely to gain a desired outcome by being inside the system. That is not to say that I will compromise on all issues, and if there was a decision or approach that I felt I could not tolerate being a party to I would actively oppose it and, if necessary, withdraw from the process.

Conclusion

The role of academics in society is very much a live debate within the academy and its disciplines, as well as within political, policy, and media circles. Some academics frame academic endeavor as the production of objective and value-free knowledge that others translate for instrumental ends. Others contend that academics should seek to change the world in proactive ways, and that all research and dissemination is inherently political. Some are concerned about the independence and impartiality of academic work, and the extent to which it is being enlisted in the agendas of other stakeholders. Nonetheless, academics are increasingly being asked to make a societal impact beyond their work being acknowledged and used by their peers. Academic researchers are being encouraged to engage the public through media channels and to work with civil society, industry, and government to address societal challenges. For post-positivist scholars, such collaborations pose certain concerns, since research rooted in critical social theory often challenges the ethos, rhetoric, and actions of government and industry and seeks to hold them to account. Working with these stakeholders necessarily means compromising on specific ideas and ideals. Yet insider positions are a powerful means of actively shaping the thinking, decision-making, and actions of stakeholders; and to exert influence from such a position is often more effective than critiquing from the outside. This chapter has sought to illustrate the concerns and praxis of such insider researchers in relation to three sustained engagements with data regimes in Ireland. Key to these projects and the effort to enact progressive change from within has been a keen sense of positionality and reflexivity (Rose 1997), both in relation to collaboration and in terms of publication stemming from the work. As an advocate-researcher, I have always sought to be open about my agenda, my situatedness within the research and policy fields, and any compromises that have been made. This transparency is important to help others frame and understand the knowledges being produced and the kinds of instrumental practice being enacted, and they help to negate, or at least make clear, concerns over independence and impartiality. While such concerns have

some legitimacy, it is my contention that using academic endeavor to change society for the better by enhancing data regimes through working with key stakeholders (who themselves are far from independent and impartial) as “critical friends” is vital.

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