

Doing a transversal method: developing an ethics of care in a collaborative research project

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Abstract Beck and Sznaider call on ‘methodological cosmopolitanism’ to transcend methodological nationalism and account for an increasingly cosmopolitanized reality. We take up their challenge by drawing on our experiences of conducting a collaborative ethnography of methodological changes in the production of population statistics within and between European national and international statistical institutes. Drawing on debates in science and technology studies, we depart from some conceptual presuppositions of methodological cosmopolitanism to define a ‘transversal method’. Referring to this method as performative and ontopolitical, we reflect on how it requires collaboration and, in our ethnography, gave rise to three practical challenges – (1) going beyond the individual project; (2) using each other’s field notes; (3) and working against the national order of things. To meet these challenges, we reflect on how this method required us to practise three modes of care – thinking with others, tinkering with field notes, and dissenting within.

Keywords CARE, COLLABORATION, COSMOPOLITANISM, ETHNOGRAPHY, ONTOPOLITICAL, PERFORMATIVITY, TRANSVERSAL METHOD

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Ulrich Beck and Natan Sznaider pose a formidable challenge in their call for the social sciences to translate a conception of cosmopolitanism into a methodology that can empirically investigate transnational phenomena that dissolve the traditional analytical dualities of ‘the global and the local, the national and the international, us and them’ (Beck and Sznaider 2006: 3). Importantly, Beck and other researchers conceive of methodological cosmopolitanism as a much-needed response to the *cosmopolitanization* of the world in which we live, that is ‘an empirical reorientation ... towards the social force of emerging cosmopolitan realities’ (Beck et al. 2013: 2). For Beck, methodological cosmopolitanism thus constitutes a conceptual and methodological adaptation of the social sciences to empirical developments in a reality ‘out there’. Beck uses climate change as a prime example to demonstrate that ‘cosmopolitanization is not a voluntary choice, nor a condition limited to a globalized elite, nor a top-down and deliberate political project’, but the unfolding of ‘unwanted, unseen globalized social tensions underlying existing national jurisdictions’ (Beck et al. 2013: 3). With this emphasis on changes in the world, Beck seeks to distinguish his ‘realistic cosmopolitanism’ or ‘cosmopolitan realism’ (Beck and Sznaider 2006: 2) from traditional versions of normative or philosophical cosmopolitanism (Beck 2004). Beck and Sznaider (2006: 2) characterize this ‘neo-cosmopolitanism’ through three shared commitments – (1) a critique of the adoption of nation-states as quasi natural units of social science research, referred to as ‘methodological nationalism’, (2) the diagnosis that the twenty-first century ‘is becoming the age of cosmopolitanism’, and (3) that we need a methodological cosmopolitanism to account for an increasingly cosmopolitan reality.

In this article, we engage with the challenges of methodological cosmopolitanism in the spirit of critical solidarity by describing how we drew on concepts in science and technology studies (STS) to do a collaborative research project. We first describe what we came to call a ‘transversal method’. Then, through *ex post* reflections on performing a transversal method, we describe how it required developing an *ethics of care*. The research project in question involved a collaborative ethnography of European national and international statistical institutes as they developed new methods for producing population statistics. The overarching question we sought to answer was how new data sources (such as big data) and analytics affect enactments of populations (as national, European or otherwise) in official statistics, considering that methods not only describe populations but bring them into being. As a team of six researchers, we aimed to do this not through nationally bounded case studies but through thematically oriented, cross-cutting ethnographic studies. These involved observing conferences and meetings, analysing reports, conducting interviews and engaging in conversations with statisticians across myriad European sites. Among other things, we followed statisticians’ debates about and experiments with digital technologies and big data and their implications for official statistics.¹

We reflect on how we methodologically carried out this project in two moves. First, we identify two key conceptual departures from Beck and Sznaider in developing a transversal method, namely that methods are performative and ontopolitical, and that they require following both human and technological actors and relations. We then elaborate on how we translated this into a research programme through the conceptual

frame of the ‘transnational field of statistics’. The latter builds on Pierre Bourdieu’s concept of fields as formed not by particular actors or spatial scales, but by the practices of and power struggles between actors that involve relations with and between humans and technologies.

In our second move we describe how performing a transversal method required specific research practices that cut across national and disciplinary boundaries, spatial scales, individual projects, and standardized research techniques. We argue that these practices required working collaboratively, which demands constant coordination and negotiation among researchers who have to manage their relations to each other and various technologies. We recognized some of these requirements from the outset, such as the need to use collaborative digital resources (for example, software for fieldwork data analysis) and the risks and vulnerabilities of sharing data and ideas with others. However, we did not anticipate how our research required specific modes of attention, modes that are typically not made visible in STS and other fields that study interconnected or transnational knowledge practices.² Drawing on the work of Maria Puig de la Bellacasa (2012, 2017), we articulate how we came to identify these modes of attention in terms of care as an ethic that responds to and helps negotiate the multiple entanglements, interdependencies, frictions and not always harmonious relations that characterize collaborative research. We describe how three modes of care – thinking with, tinkering and dissenting within – were required to collaborate, but also to establish and maintain the situated relations that made up our research practices and through which we in turn enacted our object, the transnational field of statistics.

From realist to performative methods

In this first section, we describe the ontological and ethical-political implications of an STS-inspired understanding of methodological cosmopolitanism and how it differs from Beck and Sznajder’s realist ontology. In their elaboration of methodological cosmopolitanism, Beck and Sznajder (2006: 17) make a distinction between ‘the actor perspective of society and politics and the observer perspective of the social sciences’. Based on this distinction they advocate a politics of perspectives in which a single phenomenon is studied through a ‘boundary-transcending and boundary-effacing multiperspectivalism’ in which multiple perspectives are not only adopted but also set in relation to each other as relational patterns like ‘global–local’ or ‘global–national’ (Beck and Sznajder 2006: 18). This proposition works within the register of what John Law (2004: 62) calls ‘epistemological relativism’, that is the assumption that researchers are disconnected from a pre-existing, external reality and study it from different, equally valid perspectives.

In contrast, we first conceive of methods as performative devices with ontological effects (Latour and Woolgar 1979; Law 2004; Mol 2002; Ruppert et al. 2013; Stengers 2010). Rather than the tradition of empirical realism where methods are conceived of as tools that allow for the discovery of scientific truths about a reality out there, we start from the assumption that methods help to shape and enact – that is, bring into being and reproduce – the very realities they are meant to study and describe. However,

methods are not deliberate projects realized by wilful human actors working from blueprints. Following John Law and Annemarie Mol in particular, we adopt the concept of ‘enact’ rather than ‘construct’. Hence, realities emerge as volatile, mutable accomplishments enacted by a set of socio-technical relations whose maintenance requires continuous work (Law 2008; Mol 2002; Ruppert 2011).

This starting point evokes a different set of political and ethical concerns. In contrast to Beck’s realist ontology, developing a method is not a task of responding to an increasingly cosmopolitan world ‘out there’. It rather becomes a matter of making worlds – cosmopolitan or otherwise – happen. Hence, developing methods that transcend the container thinking of methodological nationalism emerges as an ontological concern, a matter of what Mol (2002) calls *ontopolitics*. If different methods produce different bodies of knowledge that help to enact different versions of the real, then realities are not given. It becomes a matter of enacting them through research practices that can transcend the epistemological biases of methodological nationalism and open up a space for a ‘politics of the real’ (Law 2009: 243). The question of what kinds of realities do we want to enact and strengthen through methods thus guide ontological politics.

Our second and related point of departure concerns who are the actors and relations, that is, the objects and subjects of methods. In Beck’s understanding, cosmopolitanization is an exclusively human affair involving increasingly common understandings of, among other things, risk and values. However, as Bruno Latour argues, ‘a common world is not something we come to recognize, as though it had always been here (and we had not until now noticed it). A common world, if there is going to be one, is something we will have to build, tooth and nail, together’ (Latour 2004: 455). In his critique, Latour argues that the building of a common world requires including the ‘missing masses’ – the countless entities, devices, machines, mediations and relations through which humans act, and that take part in enacting a common world, or the absence of it (Latour 1992). In this regard, Latour’s critique constitutes a more fundamental disagreement about what makes up the ‘cosmos’ especially as advanced in Isabelle Stengers’s (2010) conception of ‘cosmopolitics’: ‘the presence of *cosmos* in *cosmopolitics* resists the tendency of *politics* to mean the give-and-take in an exclusive human club. The presence of *politics* in *cosmopolitics* resists the tendency of *cosmos* to mean a finite list of entities that must be taken into account’ (Latour 2004: 454; italics in original). Much STS research has embraced this approach, especially that inspired by actor network theory (ANT) – to trace networks of humans, bodies of knowledge, technologies and other non-human entities, notwithstanding national boundaries (Flyverbom 2010). This approach understands the making of knowledge as the outcome of specific and technologically mediated practices through which relations between actors, sites and scales are accomplished. These practices include the circulating standards and techniques that produce connected scientific systems and objects (for example, disease, bacteria, but also statistical formulae, visualizations, models and categories) across locations (De Laet and Mol 2000; Latour 1993).

In sum, what these approaches from STS share with other critics of methodological nationalism is that the ‘national’, ‘the global’ and other notions of scale are understood

as outcomes rather than as givens (Callon and Latour 1981; Latour 2004). As we now explain, to acknowledge an increasingly interconnected world without presupposing a common world over which humans decide involves tracing trajectories, frictions and connections across a range of sites and scales (Marcus 1995; Ong and Collier 2005; Tsing 2005).

From spaces to fields of practices

How then does one translate these conceptual starting points into a corresponding method that transcends methodological nationalism? This is a question that Beck and Sznaider (2006) also pose in their agenda-setting article, 'Unpacking cosmopolitanism for the social sciences', where they offer pointers on how to turn methodological cosmopolitanism into a research programme. First, they discuss alternative 'units of research' to replace the nation-state as an unquestioned analytical category in social science research (cf. Wimmer and Glick Schiller 2002). To transcend this much critiqued core feature of methodological nationalism, Beck and his co-authors suggest experimenting with alternative spaces, structures and processes as 'research units' (Beck and Sznaider 2006: 15), such as the transnational regimes of politics, transnational spaces and risk communities (Beck and Grande 2010). Examples of units of analysis are world port cities (to study risk communities) or regulatory problems (to study transnational policy regimes) (Beck et al. 2013; Blok and Tschötschel 2016). Such transnational research units transcend the national container model because they redirect the analytical focus to phenomena that cross nation-state boundaries.

In our research we also sought to overcome methodological nationalism with an alternative conceptual frame, namely a transnational field of statistics. Drawing on work that takes up Bourdieu's notion of the field to study international law (Madsen 2014) or transnational networks of security professionals (Bigo 2006, 2011), we understand fields as transversal configurations of power cutting across the transnational, the national and the local. As such, they transcend the predominant understanding of spatial scales as sets of hierarchically ordered, mutually exclusive analytical layers. Critically, and following Bourdieu further, neither particular actors (individual professionals or institutions) nor spatial scales (national or transnational) form the dynamics and configuration of the field, but rather practices of and power struggles between actors competing with each other over budgets, influence and agendas to maintain or improve their relative position (Scheel et al. 2016). As Bourdieu elaborates, actors do this by mobilizing and accumulating different forms of capital (cultural, economic, social and symbolic). Importantly, he emphasizes that their position-takings can be inferred from 'the practices and expressions of agents' (Bourdieu and Wacquant 1992: 105). In relation to our project, we conceived of these competitive struggles as happening through daily work practices that cut across numerous national statistical institutes and international statistical organizations rather than through legislative and regulatory edicts alone. Furthermore, those practices involve both discourses and relations with technological forms that travel and establish associations across sites, such as formulas, models, standards and visualizations (Grommé et al. 2018).

In sum, our ontopolitical stance is to enact a transnational field of statistics where the field – as distinct from a ‘space’ or ‘regime’ – is a conceptual frame that is both relational and transversal. For our project, it is the (always emerging) outcome of struggles between differently positioned actors for authority in the making of statistics. As argued in the previous section, actors are part of transversal practices involving relations with and between humans and technologies, which circulate and cut across national sites. Rather than an empirical world ‘out there’, this is the world that we made happen, by conceptualizing and then analysing transversal practices.

However, like Beck and Sznaider (2006), we were confronted with the difficult follow-up question of how to translate a promising methodological starting point into specific research practices. The answer for our team of researchers was to follow, at multiple sites and through a pragmatic mix of ethnographic research methods, the working practices, disputes, discourses, technologies and methods of statisticians through which they form a transnational field. The starting point then of our transversal method was to follow practices understood and analysed as relations that connect actors (both human and technological) across sites and scales, instead of conceiving of them as interactions between already existing entities like organizations located at mutually exclusive scales. The important point is to begin the analysis with the relation – the practices – instead of starting from a particular actor (for example institution) or scale (for example international) (Bigo 2011: 235).

Based on this understanding of practices, we defined our corresponding research method as transversal in five senses. First, the method aims to follow statistical practices across a range of scales and sites and is, thus, transversal insofar as it is multi-sited and cross-scalar (Marcus 1995). This calls for research practices that can engage with myriad field techniques to record, in the case of our project, the practical work of statisticians across multiple locations. Numerous methods of observing and documenting are needed to account for the practices that relate statisticians and sites to each other. These range from writing reports to designing algorithms and making conference calls. Second, the method transcends the distinction between discursive and non-discursive since statistical practices involve not only discourse but also material and technological work like data cleaning, modelling and visualization. Hence, following practices also means following relations to technologies and tracing technological forms as they travel. Third, the method calls for traversing myriad sites, which presents practical demands such as cultural and linguistic skills and obtaining field access within very limited time frames (Freidberg 2001; Marcus 1995). Fourth, the method calls for countless research techniques (interviews, focus groups, shadowing, participant observation) not only because the practices being followed are diverse, but also because of variations in field site access, and the language capacities and skills of each researcher. This is related to a fifth sense of transversal: the variety of practices to be followed include the highly technical to the political. This, in turn, calls for a team of researchers with complementary skills that cross disciplines. In our case, this included researchers with backgrounds in anthropology, sociology, computing, political science and international relations and who previously worked in fields of study ranging from border and migration studies to labour, STS and surveillance studies.

As these five senses of the transversal attest, both the realities we enact in our research and the research practices through which we did so are volatile, mutable accomplishments that require continuous work. In particular, transversal research practices that cross national and disciplinary boundaries, spatial scales, individual projects, and standardized research techniques require collaboration between researchers and technological devices. Hence, collaborating brings its own entanglements, affordances, investments and unforeseen complications; to negotiate and balance these, first and foremost demands what we came to define as care.

Collaboration and care in a transversal method

While we identify collaboration as essential for undertaking our version of a transversal method, making it work, as many research projects have documented (Centellas et al. 2014; Rabinow et al. 2008) is easier said than done. In practice, collaboration emerges as a multi-faceted challenge in all stages of research from organizing multi-sited fieldwork and identifying research themes to collaborative analysis and writing up articles such as this. It therefore involves a wide range of negotiations on questions ranging from rather banal ones such as what kind of platforms and research tools (repositories, software, databases) should one choose to what degree of standardization is needed on working practices and common understandings of concepts. It also concerns more complex issues like questions of authorship, or how to share research findings through field notes that are understandable to each other. Hence, collaboration is an accomplishment that requires constant investment by all researchers who have to manage their relationships with each other as well as with the various technologies (like software), which bring their own requirements, complexities and affordances.

It is with regard to such issues that we identified care as integral to a transversal method that involves collaboration among researchers. We came to this by drawing on the work of Puig de la Bellacasa (2017) who articulates a feminist, non-idealized understanding of care that leaves space for moments of tension and hesitation and the negotiation of asymmetrical power relationships. She mobilizes Fisher and Tronto's definition of care as *'everything that we do to maintain, continue and repair "our world" so that we can live in it as well as possible*. That world includes our bodies, ourselves and our environments, all of which we seek to interweave in a complex, life-sustaining web' (Fisher and Tronto 1990: 40; italics in original). This definition highlights that caring is about creating and fostering relations. To think and do research with care is an 'ontological requirement of relational worlds' (Puig de la Bellacasa 2012: 199), which is not reducible to a single normative stance or ethical commitment but is an unavoidable necessity in a relational world of inescapable interdependencies.

This reading of care as a necessity resonates with our conception of practices as relational. If practices are essentially about the creation and maintenance of relations between people, sites, devices, scales, technologies, and so on, then this also applies to our practices of research and knowing. Drawing on Donna Haraway's work, Puig de la Bellacasa (2012: 199) captures this well when she underlines that 'creating knowledge is a relational practice' that is only possible through a web of relations

between artefacts, concepts, inscription devices, canonical knowledge, co-researchers, research participants, funding bodies, and so forth. Hence, thinking becomes only conceivable as ‘thinking with’ (Puig de la Bellacasa 2012).

However, we only became fully aware of the importance of care for collaborative research towards the end of our project. For a period of more than three years we tried to make sense of the everyday interdependencies, relations, decisions, frictions and challenges we encountered. This was a learning process that featured moments of hesitation, conflict and reconsideration as well as an ongoing commitment to reflexivity. One outcome is that we can confidently say that without taking the ontological imperative of caring for our relations to other team members and their concerns, interests and needs seriously, collaboration risks degenerating into a way of increasing academic outputs or exploitative working relationships. This is a real risk in the context of schemes that evaluate researchers according to quantifiable research outputs and the resulting institutional pressure to publish more articles in high-ranked peer-reviewed journals in shorter time frames. Especially in this context, care is required to negotiate the varying career needs, research interests, disciplinary backgrounds, and theoretical and methodological preferences of all team members. It also points to the affective dimension of the care work needed to create a sense of community and solidarity within a research team to counter the high demands and pressures of a competitive academic system (Davies and Horst 2015; Degn et al. 2017).

Conversely, Puig de la Bellacasa’s understanding of care is an important reminder *not* to use it as a predefined normative apparatus. Her understanding of care as not a choice, but a condition of knowledge prevents us from falling for unattainable ideals of collaboration as the frictionless fusion of a research team into a harmonious collective. Rather, collaboration can also mean keeping distance and guarding the independence of positions needed to work together (Puig de la Bellacasa 2017). It is equally important that ‘caring and being cared for is not necessarily rewarding or comforting’ (Puig de la Bellacasa 2012: 198–9). The care work required to facilitate collaborative research may, for instance, entail painstaking discussions to negotiate diverging interests or conflicting interpretations. It also comprises the ‘caring craftwork’ of principal investigators (PIs) in the assembling and nurturing of research teams (Davies and Horst 2015). Hence, collaboration emerges as a complex web of relations that have to be continuously re-enacted through multiple forms of care work.

Finally, the pertinence of care for a transversal method also relates to our understanding of methods as performative. If the methods we invoke help to enact the very realities they seek to know, then caring involves an ethico-political dimension insofar as we have to consider the ontological effects of the webs of relation we create in, through and for our research. While we are not fully in control of the ontological effects of our research practices, we remain answerable for the web of relations that we foster in the course of our research. Hence, caring involves a constant concern for the kinds of relations we form as well as their ontopolitical consequences.

We take up three aspects of this conception of care to reflect on issues we encountered. The first concerns how our interdependencies during fieldwork engaged us in what Puig de la Bellacasa refers to as ‘thinking with’. As collaborative ethnographers,

we were rarely in the field alone, and our challenge was to acknowledge and foster our situated relations with the experiences and ideas of others through which our data and analyses emerged. The second aspect is ‘tinkering with’, which involves recognizing the experimental and speculative qualities of doing research collaboratively. We reflect on how this applied not only to our relations to each other but also to material and technological things such as the field notes that both facilitated and frustrated our collaborative research. A third mode of care is what Puig de la Bellacasa refers to as ‘dissenting within’. We take this to mean that caring does not necessarily involve smoothing out differences arising from different disciplinary and cultural backgrounds. Rather, it calls for a mode of caring that involves forming ‘unnatural alliances’ to build common concerns (Puig de la Bellacasa 2017: 79).

Before discussing what these aspects of care specifically meant for our transversal method, we will outline how they emerged from the collaborative research practices we initially organized. Each of us undertook fieldwork at different European statistical institutes, related government agencies and conferences with visits ranging from one day to several weeks over a period of approximately two years. We agreed from the outset that we would share fieldwork material such as primary documents, field notes, memos and experiences as well as secondary sources, concepts, and data analysis. Yet, many of the practical details of sharing had to be negotiated as we set up various collaborative digital infrastructures such as software for fieldwork data storage and analysis, project management and reference management. This included adopting an agreement on data sharing, access and authorship that would have force beyond the project’s duration. In addition, we agreed to hold regular team meetings to discuss fieldwork experiences, secondary literature, and research outputs and to organize workshops with other researchers on topics of mutual interest (for example classification). Regular informal meetings in our shared office space accompanied all these organized practices, especially around data analysis and collaborative writing.

A fitting example of the practicalities and negotiations involved in translating methodological commitments into specific research practices is the collaborative thinking and writing that led to this article. It originated from a ‘walking–talking’ seminar in Greenwich Park, London, organized in 2016 for the purposes of writing a working paper on methods of collaboration.³ Each of us provided initial ideas in advance, ranging from the discomfort of working with other people’s categories to the question of how to set up ‘para-sites’ (Center for Ethnography 2009). We then discussed our ideas in pairs of walking–talking partners, which switched every ten minutes. Afterwards, we identified key themes emerging from these discussions, which formed the basis of a six-authored working paper (Scheel et al. 2016). An overarching theme we identified was how to overcome methodological nationalism in a European research project with a European research focus (and a European team of researchers).

While the specificities of this and the other collaborative practices mentioned above demanded much attention, the care work they necessitated was implicit rather than prefigured. For example, we found that each practice required care in terms of managing and negotiating the varying capacities to work with digital technologies; the risks and vulnerabilities of sharing data and ideas; and the different expectations and

anxieties about working collaboratively at different stages of an academic career. Our intention in the following sections is to elaborate on some of the modes of attention our collaborative research practices required and to indicate how they have challenged us to think differently about academic research. Specifically, we do this through discussing three of the five ‘pitfalls’ of doing collaborative ethnography we identified in our working paper, each initially written by groups of two or three team members. While writing together did not mean equal contributions, the following cases nevertheless constitute – albeit in refined and updated form – the first six-way collaborative output of our project and present a transversal method in action.

Beyond the individual project: thinking with others

To explore the mode of attention we came to call ‘thinking with’, we first describe how Francisca positioned herself in the field. She often introduced herself, at the national statistical institute (NSI) she was studying, as a member of a team doing research at various statistical institutes across Europe. More generally, talking about another NSI taking part in the project became a mode of doing fieldwork across sites. That some of her research subjects knew other team members also played a part in connecting her fieldwork to other sites. Because one of her objects of study was an innovation lab for experiments with big data, she often mentioned *Big Data & Society*, a journal that published work on such experiments. While the journal was not strictly part of the research project, Evelyn, the project’s PI was its editor. Referring to the journal helped negotiate access to various sites, such as attending a data camp organized by an NSI and a university. This in part occurred as a result of a concurrent and uncoordinated set of email communications between Evelyn and a statistician at the NSI where Francisca was doing fieldwork. Finally, some topics of conversation traveled between team members and research subjects; an example is the Caribbean Netherlands, which was a topic of interest that cut across and conjoined various conversations between Evelyn, Francisca and statisticians across Europe.

The above points out that we were never alone in the field. Although each team member was responsible for conducting fieldwork in a single NSI, his or her presence was not limited to that institution or country. In this mode of working, each team member is present at several field sites, while also transversally connecting the sites. In these ways, our practices involved a form of attention along the lines of Puig de la Bellacasa’s notion of ‘thinking with’ – ‘a style of connected thinking and writing that troubles the predictable academic isolation of consecrated authors by gathering and explicitly valorizing the collective webs one thinks with’ (Puig de la Bellacasa 2017: 202). Although her conception seems mainly attuned to writing and analytic practices, its relational understanding applies to how fieldwork also involves thinking in connection with others.

This is well illustrated by the development of topics of conversation, research interests and new ideas between researchers and field sites, as in the case of the Caribbean Netherlands. To work across fields and to develop shared orientations also required an awareness of disciplinary sensitivities and theoretical resources across

disciplines, countries and interests. For instance, Francisca and Stephan come from different disciplinary backgrounds (Francisca from STS and Stephan from politics and migration studies) but they make each other aware of the concepts and discussions in their fields, which then come to connect their practices and thinking.

Although ‘thinking with’ started in the field, it also included thinking with technologies employed in the course of doing fieldwork. As noted previously, a range of everyday artefacts and technologies took part in shaping the relations to our field sites and each other. In the case of Francisca and Stephan, Zotero, a collaborative bibliographic referencing platform, helped open up their respective literatures. This platform grew into a shared world of literature relevant to their different fields, interests and studies. To create and maintain this world, we engaged in the often frustrating work of designating and applying common labels or categories, such as ‘innovation’ or ‘aesthetics’. Although we faced many minor frustrations and challenges, we recognized that the labour involved in its maintenance had significant bearing not only on accessing each other’s disciplines but also on shaping common understandings.

A second aspect we highlight are the references Francisca made to the journal Evelyn edited. Beyond facilitating fieldwork access, the journal established connections between us and our research subjects who both followed and published articles in it. It became part of the relations that make up the transnational field of statistics, including ways of thinking about the social, political, cultural and economic implications of big data. We therefore did not approach our fieldwork sites from detached positions. The journal and other relations were part of how we brought a transnational field into being in which researchers and statisticians all take part; in this sense, our transversal method was performative.

It follows from these two points that collaborative ethnography is not simply the sum of the work of individual researchers from different backgrounds working at different field sites. Controlling for time, language, financial and other differences, research by a single researcher would yield dissimilar results. Instead, Francisca’s subjectivity, status, and legitimacy were connected to those of the team, and vice versa. Her research participants connected her work to that of other researchers, and to other field sites, while some topics also travelled to conjoin her work to other sites, team members and research participants. What came into existence was a relationship as ‘something [that] passes between the two which is neither in one nor the other’ (Deleuze and Parnet 1987: 10).

Our experiences thus complicate models of the ‘individual project’, which assume that ‘interpretive and authorial virtuosity is the mainspring of good work’ (Collier et al. 2006: 1). Although arguments in favour of acknowledging research and writing as collaborative acts are frequently made, the imaginary of the ‘heroic’ individual on a quest for knowledge is still dominant in ethnographic research (Clifford 1983: 120). This is not surprising; as in any other profession, researchers depend on the accumulation of cultural capital – the product of social, cultural, political and historical situations (Bourdieu 1984, 2010). In contemporary academic practice, researchers are increasingly forced to occupy individualized and entrepreneurial subject positions. To be sure, academic knowledge production is moving towards greater openness and

sharing of research outputs. However, this development does not capture the exchange of ideas and influences that characterize the collaborative research process.

Extending the discussion about collaboration beyond the notion of authorship to doing a collaborative ethnography, therefore, calls for being attuned to how our thoughts and ideas relate and connect in ways that may not be immediately accessible to us. While this is also true of researchers on individual projects, the issues are more pressing for a transversal method that involves shared research practices across disciplinary and national borders. Our point is not that we should describe and acknowledge each and every relationship into which we enter or mark each instance in which we are part of enacting a field – clearly that would be impossible. In addition, there are many more issues that may arise from these practices, some of which we discussed in the previous section (including intellectual trust, agreements on shared concepts, lines of authority for project decision making and negotiations over authorship). Yet, rules and agreements alone cannot address these. Rather, a professional ethics of care calls for acting responsibly in the light of the many relations that compose our ideas, and shape the thoughts, texts, and data that we produce.

Documenting and sharing: tinkering with field notes

The field note was a research practice we adopted for documenting and sharing the transversal practices of statisticians so that we could investigate relations between field sites. Along with sharing other types of primary documents such as reports, we created notes to record, for example, participant observations, interviews, and informal conversations. Adopting field notes as a research practice required some agreed upon conventions and technologies, including classification schemes, software, and database designs. We introduced a few conventions such as beginning each field note with data on the observer, the situation (for example a meeting), language of the field site, date and so on. In addition, we created a structured database using NVivo 10 software, which included conventions for classifying and organizing field notes. These conventions were the outcome of (long and sometimes frustrating) negotiations to reach common understandings and practices (for instance on common terminology on document types), while also retaining our independence in how we recorded our activities and ensuring the practice would not be too time consuming. Aside from this protocol, we left the content largely to the discretion of the researcher. For instance, we each decided whether or not to translate our notes fully into English (when it was not the spoken language), or the form or style of notes (some were structured in bullet points, while others were narratives of a full day).

An experiment we conducted a year into the project helped us identify documenting and sharing practices as a form of relational work we came to describe as ‘tinkering with’ care. Given the limited background knowledge about each other’s field sites, we wanted to know how comprehensible our field notes would be to each other. We were also aware that we never simply record observations as data but are always engaged in ‘translation’ (Callon 1986; Latour 1993), which involves filtering, evaluating, interpreting and analysing the situated practices of statisticians. A deceptively simple

practice in the hands of a single researcher for whom these issues often remain implicit became a challenge when in the hands of many.

The experiment was structured around reading the field notes of three team members who studied three different sites, and broadly focused on the topic of migration statistics. At first glance, the notes differed in style, length, formatting and detail. The first field note was composed as a bilingual text, with a brief abstract in English at the beginning followed by detailed notes written in the native language of the researcher and the field site. The second was an almost verbatim transcript of an interview (though unrecorded) conducted in the native language of the researcher, which the same researcher had fully translated into English. The third researcher conducted his fieldwork in English, but this was not the spoken language of his site. Prior to the experiment, we all expressed concern about what others would think about the length, details, comprehensibility and coverage of relevant situational information recorded in our field notes. In other words, how we interpreted and adjusted agreed conventions for doing field notes would be open to the scrutiny of others, thus making us vulnerable as the details of how we practised research were exposed to our collaborators.

One of the main findings was that each of the different field notes was understandable to different researchers. While documented and expressed differently, we were able to grasp key points and engaged in lively discussions about them. In other words, we focused more on the content of others' field notes rather than on details such as narrative style. That differences led to problems of interpretation meant that we had to follow up with each other.

While heterogeneity can potentially frustrate, in this case the field notes became openings to engage in co-interpretive work that took us beyond nationally bound thinking. It required caring for the different styles of others and to approach these as 'opportunities for socialization' across different disciplinary customs (Centellas et al. 2014). That is, rather than complicating (or inhibiting) collaboration, the translation work of individual researchers facilitated collaboration and fostered curiosity. In other words, field notes functioned as catalysts of collaboration precisely because they were not fully or at least immediately understandable to other researchers, and in this way pushed us to 'think with' others (Puig de la Bellacasa 2017: 82, on Haraway's idea).

Rather than an idealized notion of collaboration that does away with unsettling moments and disagreements, we suggest that 'tinkering with' field notes involved performing a mode of care. It entails Puig de la Bellacasa's proposition that much of the work of the study and analysis of technoscience is open-ended; a constant reworking of relations with research subjects and artefacts is required to make these collaborations function as well as possible. It is a form of experimental work as the outcomes cannot be known in advance. This type of ongoing adjustment work has been described in feminist science studies as a mode of care (Mol et al. 2010). We suggest that our field note practice demonstrated the relevance of this mode of care in relation to a collaborative ethnography.

The practice of tinkering with field notes illustrates this in two ways. First, it captures what was required to complete the everyday mundane task of producing and

working with field notes. Our methods could not be carried out as blueprints. Questions, concepts, and techniques for doing and sharing field notes were often interpreted and adjusted ‘on the fly’ in the field. In other words, we constantly adjusted and tinkered with field note practices in the field. Recognizing these tinkering practices implies respecting relative independence on how researchers translate their observations into field notes. At the same time, the practice required a professional ethics that recognizes the vulnerabilities of sharing notes with potentially critical others.

Second, tinkering refers to how we came to relate to each other and to our research object and subjects in new ways through discussing our field notes. Field notes became entry points that facilitated dialogue and were generative of collaboration on matters of concern that did not necessarily precede but emerged through them. Sharing field notes thus turned into not treating our differences as weaknesses to be resolved by further standardization. Rather, differences became catalysts because, through the back-and-forth engagements and discussions they demanded of us, they required us to keep our situated relations in the field and our translation work in sight.

This understanding of collaboration recognizes the need to maintain protocols and a common grasp of research objects, while at the same time facilitating the ‘need for argument’ (Star and Griesemer 1989: 409). In their work on collaboration among diverse researchers and practitioners, Star and Griesemer (1989) point out the need for ‘method standardization’ to reconcile different research practices. However, they argue, it does not mean resorting to consensus. For them, heterogeneity and cooperation can and do coexist and the challenge is to define standards for practices that can vary while being sufficiently robust to maintain a ‘common identity’ (Star and Griesemer 1989: 393).⁴ For our practice of field notes, we suggest that while heterogeneity at times inhibited collaboration, it did make it possible to ‘overcome conventionality’ and ‘argue with other parts of science’ (Star and Griesemer 1989: 404).

As a final reflection, field notes alongside other documents will continue to have a life in a shared NVivo database beyond the timeframe of the project. We note this, for much of our analytical and writing work will overflow the boundaries of the project and extend into our future research interests and projects. While tinkering with our relations to the field and each other through field notes will remain a research and ethical commitment, how we preserve our relations to each other and understanding that the knowledge we create is a relational practice will be an ongoing challenge.

Against the national order of things: dissenting within

In this section, we engage with Puig de la Bellacasa’s notion of ‘dissenting within’, a form of care she proposes that highlights that ‘knowledge-making based on care, love and attachment is not incompatible with conflict [and] that care should not be reduced to smoothing out of differences’ (Puig de la Bellacasa 2017: 78). Dissenting within denotes a form of caring that acknowledges that we are embedded in worlds (and communities) we would rather not endorse but prefer to criticize and change. In relation to our fieldwork, we interpret this in relation to how our ideas and positions in academic debates are partial and situated as they emerge from our different academic traditions

and the debates with which we engage. For us, dissenting within also emphasizes our different positions on the national cultures in which we do research. This implies that we endorse and negotiate relations of significant otherness with regard to our research subjects and each other. Part of this work is to create ‘unnatural alliances’ based on common concerns without negating differences and the often conflict-ridden reality of collaboration. In the following section, we illustrate this dimension of a non-idealized understanding of thinking with care by reflecting on how the ‘national order of things’ (Malkki 1995) kept on challenging the endeavour of our research project to transcend methodological nationalism through a transversal method.

While in the field we recognized that the national order of things, that is the organization of the world in territorially mutually exclusive nation-states claiming to represent people with allegedly distinct ‘national cultures’, affected our research.⁵ For instance, each of us had varying degrees of familiarity with the national cultural contexts of our field sites, and this inevitably had an impact on fieldwork access and the kinds of methods we could use. Moreover, in our fieldwork, we were – to varying degrees – confronted with practices that enact the very methodological nationalism we sought to transcend. The most striking example of this was that part of the work of statisticians is to constitute social phenomena, like unemployment, as national phenomena through the production of statistics that are, by default, explicitly based on the national container model of populations (Dumitru 2014: 9).

That we were each positioned differently in relation to the socio-cultural contexts of our field sites offered us the opportunity to explore how the ‘national order of things’ – in the form of such things as national cultures and language capacities – may affect our research practices and thus undermine our efforts to move beyond methodological nationalism. Stephan and Ville explored this through the semi-structured interviews they conducted with other team members whom they asked to elaborate on situations in which they experienced their positionality (for example, language capacities or familiarity with the bureaucratic culture) as advantageous or disadvantageous in terms of field access and methods available.

Interestingly, the advantages researchers familiar with the national culture of their field site mentioned largely mirrored the disadvantages those lacking this familiarity cited: three researchers socialized in the national contexts of their field sites stated that this familiarity implied the ability to understand ‘nearly everything we hear or see written at our field sites’. Furthermore, this familiarity included practical knowledge of how to deal with the local bureaucratic culture and approach prospective research participants.⁶ It also entailed a sense of what could be requested and done at field sites without putting off or offending research subjects. One researcher noted that, because of this familiarity, ‘people relate to you a lot easier’. Those without it reported how their lack of practical knowledge of how to negotiate with officials shaped their research practices and opportunities. One researcher, for example, noted that at one point during his research at an NSI, he was frustrated by not receiving replies to his e-mails, only to learn later that a low response rate is common in the local public sector. After that, he adapted his strategy to get field access by contacting people over the phone and by writing shorter interview requests more frequently.

However, having a different national background was described as not entirely disadvantageous. In fact, the notion of dissenting within allows us to consider the alleged advantages and disadvantages in terms of challenges resulting from the fact that we – as embodied subjects – and our knowledge production are embedded within the very national order of things we set out to destabilize and critique. For example, two researchers stated that their status as relative ‘outsiders’ at their NSI field sites was liberating in that it gave them the freedom to ask questions that might otherwise have been perceived as ‘stupid’, politically radical or outright offensive. Furthermore, it is important to note that most considered other factors equally or even more important than familiarity or unfamiliarity with national cultural contexts. While female researchers emphasized the importance of gender relations, if not sexism, others mentioned age or professional and disciplinary boundaries as having important effects on their fieldwork options and experiences. These answers illustrate the well-established point that we, as researchers, are always situated in our field sites in multiple, intersecting ways in terms of class, ‘race’, gender, age, disability, sexual orientation, nationality, professional background and so on (Abu-Lughod 1991; Clifford 1986; Gupta and Ferguson 1997; Haraway 1988). Consequently, our diverse and shifting entanglements in a web of intersecting power relations cannot be captured by neat insider/outsider binaries. Rather, it seems more adequate to think of our positionalities in terms of differential inclusion to highlight both the continuity and simultaneity of interwoven processes of inclusion and exclusion (Casas-Cortes et al. 2015: 79–80). Thus, the knowledge we produce can only be a partial, situated knowledge, as Haraway (1988) famously argued, because researchers are embodied subjects who, rather than seeing everything from nowhere, always look and speak from somewhere.

Because ‘positionality is always part of any ethnographic work’, as the project’s PI aptly noted (see Gupta and Ferguson 1997), our positionality should ‘not be problematized but turned into a strategy where difference opens up the possibility of knowing and understanding differently’. This position resonates with Puig de la Bellacasa’s (2017: 78) stance that ‘thinking with care compels us to think from the perspective of how cuts foster relationships rather than how they disconnect worlds.’ From this perspective, a researcher’s lack of familiarity with the national-cultural context of the field site does not constitute an insurmountable obstacle. It is a starting point for experimenting with alternative modes of doing collaborative ethnographic fieldwork and relating to one’s field site. In this instance, the lack of language capacities and practical knowledge of the local bureaucratic culture implied a dependency on others, translated into a need to engage in ‘unnatural alliances’ with a range of human and more than human actors. These may include translation software, or, as in the case of Stephan’s research, a local research assistant to negotiate language barriers and the intricacies of the national administrative culture.

While this dependency on the support of a local research assistant was not devoid of tensions and conflicts (Cons 2014), this unnatural alliance nevertheless resulted in a productive collaboration and interesting research constellations. For instance, it affected the construction of the ‘field’ because it forced Stephan to reflect on his research priorities at an early stage, so he could instruct the research assistant about

topics on which to focus when taking notes of statisticians' discussions. The strategy of making our differential inclusion in intersecting power relationships productive (rather than bemoaning its difficulties) constitutes, in our view, the best way forward to enact a transversal method capable of challenging the weight of the national order of things. This becomes apparent if one acknowledges that the alternative – only deploying researchers socialized in the national-cultural context of their field sites – in itself constitutes a form of methodological nationalism, a form that Brubaker (2002: 164) calls 'groupism' – the tendency to view groups along national lines as 'internally homogeneous and externally bounded entities' and 'fundamental units of social analysis'. Instead, the formation of unnatural alliances, while not devoid of hierarchies, tensions and divergent positions, potentially destabilizes the boundaries implied by the 'tyranny of the national' (Noiriel 1991) through the creation of a shared problem space that permits us to dissent within (and against) the national order of things.

Finally, it is important to note that dissenting within is a form of care that is not only relevant for negotiating otherness. It is also important for dealing with conflicts and divergent positions in the context of collaborative research. For dissenting within implies to disagree from within, and thus, to argue from within and *with each other for each other*. It means to argue and dissent in a way that shows commitment to a community or, more precisely, 'commitment to share the problems of a community' about which one cares (Puig de la Bellacasa 2017: 80). Ultimately, dissenting within emerges as a catalyst for collaborative research as it calls for a mode of relating to others without negating differences, escaping from the tensions and conflicts implied by collaborative research, or returning to individualistic research and writing practices.

Postscript

We have engaged with the challenges of doing methodological cosmopolitanism in ways that align with and depart from how it has been developed by Beck and other researchers. By drawing on work in STS, we have articulated this in our proposal for a transversal method through which we have highlighted two concerns – the ontopolitical and the ethico-professional. Regarding the latter, we only came to identify care as an integral element of doing a transversal method towards the end of our project. Just as our understanding of a transversal method was not settled a priori but came to be defined through our collaboration, it is through this article that we have also reflexively come to understand care in the ways we have described – as the 'ontological requirement of relational worlds' (Puig de la Bellacasa 2012: 199). We have discussed our care practices at length to draw out aspects of professional research ethics that are different from other types of ethics previously articulated in relation to cosmopolitanization, such as choosing which normative issues to address, for example how to write about the effects of late capitalism (Beck and Grande 2010).

At the same time, the professional ethics discussed in this article are closely connected to the ontopolitical stance with which we began, namely that our methods are entangled with the enactment of the phenomena we seek to represent. Such a stance also means caring about the kinds of realities we enact and strengthen through our

methods. For us, this means enacting a transnational field of statistics as the outcome of power struggles between actors performed through their practices and relationships to each other and to technologies. We have used this method in other publications in which we have analysed statistical concepts, ways of thinking and methodological innovations by following their development, movement and circulation across national boundaries and through various transnational arrangements (task forces, demonstrations, networks, international projects, wikis, conferences, hackathons) where neither national nor regional (for example EU) scales are relevant containers.

One article, for example, analysed experiments with mobile phone location data as a methodological solution to the problem of measuring and knowing mobile populations (Scheel and Ruppert 2019). Experimental practices were analysed as objects of professional struggles performed through the circulation of and competition between ideas, concepts, statistical formulae, demonstrations, models and visualizations. Rather than being matters of national concern, the legitimation of methodological innovations happened through practices that circulated and traversed political, professional and geographical boundaries. These practices and struggles were understood as one set among numerous overlapping and intersecting practices that come to make up the transnational field of statistics. Instead of an empirical world ‘out there’, that is the reality that our transversal method enacted.

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Notes

1. The research was conducted as part of ARITHMUS (Peopling Europe: how data make a people), an ERC funded project, which began in 2014. The authors made up a team of six researchers who followed the working practices at five NSIs (UK Office for National Statistics, Statistics Netherlands, Statistics Estonia, Turkish Statistical Institute, and Statistics Finland) and two international organizations (Eurostat and UNECE).
2. Deville et al. (2016) and Van der Velden (2017) present rare explorations of related issues.
3. The format was inspired by the ‘walking seminar’ initiated by Annemarie Mol in Amsterdam (cf. <http://walkingseminar.blogspot.com/>).
4. A second mechanism that they identify with which to maintain a common ‘identity’ across practices, but that we do not address here, is the ‘boundary object’, such as definitions.

5. By problematizing how the researchers' familiarity or lack of familiarity with the national-cultural contexts of their field sites affects their research practices we do not intend to invoke a reading of 'national cultures' as homogenous, stable and clearly bounded entities 'rooted' in particular places. We understand 'national cultures' to be historically contingent enactments intertwined with the emergence of territorialized nation-states as the dominant form of political organization and the related build-up of administrative systems, the homogenization and suppression of dialects, and so on (Anderson 2006).
6. We understand practical knowledge as a set of skills mastered through experience and therefore 'exceptionally difficult to teach apart from engaging in the activity itself' (Scott 1998: 313).

References

- Abu-Lughod, L. (1991) 'Writing against culture', in R. Fox (ed) *Recapturing anthropology: working in the present*, Santa Fé: School of American Research Press, 137–62.
- Anderson, B. (2006) *Imagined communities: reflections on the origin and spread of nationalism*, London: Verso.
- Beck, U. (2004) 'Cosmopolitical realism: on the distinction between cosmopolitanism in philosophy and the social sciences', *Global Networks*, 4 (2), 131–56, doi: 10.1111/j.1471-0374.2004.00084.x.
- Beck, U. and E. Grande (2010) 'Varieties of second modernity: the cosmopolitan turn in social and political theory and research', *British Journal of Sociology*, 61 (3), 409–43, doi: 10.1111/j.1468-4446.2010.01320.x.
- Beck, U. and N. Sznaider (2006) 'Unpacking cosmopolitanism for the social sciences: a research agenda', *British Journal of Sociology*, 57 (1), 1–23, doi: 10.1111/j.1468-4446.2006.00091.x.
- Beck, U., A. Blok, D. Tyfield and J. Y. Zhang (2013) 'Cosmopolitan communities of climate risk: conceptual and empirical suggestions for a new research agenda', *Global Networks*, 13 (1), 1–21, doi:10.1111/glob.12001.
- Bigo, D. (2006) 'Globalized (in)security: the field and the ban-opticon', in D. Bigo and A. Tsoukala (eds) *Illiberal practices of liberal regimes: the (in)security games*, Paris: L'Harmattan, 5–49.
- Bigo, D. (2011) 'Pierre Bourdieu and international relations: power of practices, practices of power', *International Political Sociology*, 5 (3), 225–58, doi: 10.1111/j.1749-5687.2011.00132.x.
- Blok, A. and R. Tschötschel (2016) 'World port cities as cosmopolitan risk community: mapping urban climate policy experiments in Europe and East Asia', *Environment and Planning C: Government and Policy*, 34 (4), 717–36, doi: 10.1177/0263774X15614673.
- Bourdieu, P. (1984) *Distinction: a social critique of the judgement of taste*, Cambridge, MA: Harvard University Press.
- Bourdieu, P. (2010) *Homo academicus*, Stanford, CA: Stanford University Press.
- Bourdieu, P. and L. Wacquant (1992) *An invitation to reflexive sociology*, Cambridge: Polity Press.
- Brubaker, R. (2002) 'Ethnicity without groups', *European Journal of Sociology*, 4 (2), 163–89, doi: 10.1017/S0003975602001066.
- Callon, M. (1986) 'Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay', in J. Law (ed.) *Power, action and belief: a new sociology of knowledge*, London: Routledge and Kegan Paul, 196–233.
- Callon, M. and B. Latour (1981) 'Unscrewing the big Leviathan: how actors macro-structure reality and how sociologists help them to do so', in K. D. Knorr-Cetina and A. V. Cicourel (eds) *Advances in social theory and methodology: toward an integration of micro-and macro-sociologies*, Abingdon: Routledge, 277–303.

- Casas-Cortes, M., S. Cobarrubias, N. De Genova, G. Garelli, G. Grappi, C. Heller, S. Hess, B. Kasparek, S. Mezzadra, B. Neilson, I. Peano, L. Pezzani, J. Pickles, F. Rahola, L. Riedner, S. Scheel and M. Tazzioli (2015) 'New keywords: migration and borders', *Cultural Studies*, 29 (1), 55–87, doi: 10.1080/09502386.2014.891630.
- Centellas, K., R. E. Smardon and S. Fifield (2014) 'Calibrating translational cancer research: collaboration without consensus in interdisciplinary laboratory meetings', *Science, Technology, & Human Values*, 39 (3), 311–35, doi: 10.1177/0162243913505650.
- Center for Ethnography (2009) 'Center as para-site in ethnographic research projects', University of California Irvine School of Social Sciences, available at: www.ethnography.uci.edu/files/docs/old_site/theme3.htm.
- Clifford, J. (1983) 'On ethnographic authority', *Representations*, 1 (2), 118–146, doi: 10.2307/2928386.
- Clifford, J. (1986) 'Introduction: partial truths', in J. Clifford and G. E. Marcus (eds) *Writing culture: the poetics and politics of ethnography: a school of American research advanced seminar*, Berkeley, CA: University of California Press, 1–26.
- Collier, S., A. Lakoff and P. Rabinow (2006) 'What is a laboratory in the human sciences?', ARC working paper no. 1, 2 February, available at: <http://anthropos-lab.net/wp/publications/2007/08/workingpaperno1.pdf>.
- Cons, J. (2014) 'Field dependencies: mediation, addiction and anxious fieldwork at the India–Bangladesh border', *Ethnography*, 15 (3), 375–93, doi: 10.1177/1466138114533457.
- Davies, S. R. and M. Horst (2015) 'Crafting the group: care in research management', *Social Studies of Science*, 45 (3), 371–93, doi:10.1177/0306312715585820.
- Degn, L., T. Franssen, M. P. Sørensen and S. de Rijcke (2017) 'Research groups as communities of practice: a case study of four high-performing research groups', *Higher Education*, 76 (2), 231–46, doi: 10.1007/s10734-017-0205-2.
- De Laet, M. and A. Mol (2000) 'The Zimbabwe bush pump: mechanics of a fluid technology', *Social Studies of Science*, 30 (2), 225–63, doi: 10.1177/030631200030002002.
- Deleuze, G. and C. Parnet (1987) *Dialogues II*, London: Athlone Press
- Deville, J., M. Guggenheim and Z. Hrdličková (2016) 'Same, same but different: provoking relations, assembling the comparator', in J. Deville, M. Guggenheim and Z. Hrdličková (eds) *Practising comparison: logics relations collaborations*, Manchester: Mattering Press, 99–129.
- Dumitru, S. (2014) 'Qu'est-ce que le nationalisme méthodologique? Essai de typologie', *Raisons Politiques*, 54 (2), 9–22, doi: 10.3917/rai.054.0009.
- Fisher, B. and J. C. Tronto (1990) 'Toward a feminist theory of caring', in E. K. Abel and M. K. Nelson (eds) *Circles of care: work and identity in women's lives*, Albany: State University of New York Press, 35–62.
- Flyverbom, M. (2010) 'Hybrid networks and the global politics of the digital revolution: a practice-oriented, relational and agnostic approach', *Global Networks*, 10 (3), 424–42, doi: 10.1111/j.1471-0374.2010.00296.x.
- Freidberg, S. (2001) 'On the trail of the global green bean: methodological considerations in multi-site ethnography', *Global Networks*, 1 (4), 353–68, doi: 10.1111/1471-0374.00020.
- Grommé, F., E. Ruppert and B. Cakici (2018) 'Data scientists: a new faction of the transnational field of statistics', in A. Knox and D. Nafus (eds) *Ethnography for a data saturated world*, Manchester: Manchester University Press, 99–129.
- Gupta, A. and J. Ferguson (1997) 'Discipline and practice: "the field" as site, method, and location in anthropology', in A. Gupta and J. Ferguson (eds) *Anthropological locations: boundaries and grounds of a field science*, Berkeley, CA: University of California Press, 1–46.
- Haraway, D. J. (1988) 'Situated knowledges: the science question in feminism and the privilege of partial perspective', *Feminist Studies*, 14 (3), 575–99, doi: 10.2307/3178066.

- Latour, B. (1992) 'Where are the missing masses? The sociology of a few mundane artifacts', in W. E. Bijker and J. Law (eds) *Shaping technology/building society: studies in sociotechnical change*, Cambridge, MA: MIT Press, 225–58.
- Latour, B. (1993) *The pasteurization of France*, Cambridge, MA: Harvard University Press.
- Latour, B. (2004) 'Whose cosmos, which cosmopolitics? Comments on the peace terms of Ulrich Beck', *Common Knowledge*, 10 (3), 450–62, doi: 10.1215/0961754X-10-3-450.
- Latour, B. and S. Woolgar (1979) *Laboratory life: the construction of scientific facts*, Los Angeles: Sage.
- Law, J. (2004) *After method: mess in social science research*, London: Routledge.
- Law, J. (2008) 'On sociology and STS', *Sociological Review*, 56 (4), 623–49, doi: 10.1111/j.1467-954X.2008.00808.x.
- Law, J. (2009) 'Seeing like a survey', *Cultural Sociology*, 3 (2), 239–56, doi: 10.1177/1749975509105533.
- Madsen, M. R. (2014) 'The international judiciary as transnational power elite', *International Political Sociology*, 8 (3), 332–4, doi: 10.1111/ips.12063.
- Malkki, L. (1995) 'Refugees and exile: from "refugee studies" to the national order of things', *Annual Review of Anthropology*, 24, 495–523, doi: 10.1146/annurev.an.24.100195.002431.
- Marcus, G. E. (1995) 'Ethnography in/of the world system: the emergence of multi-sited ethnography', *Annual Review of Anthropology*, 24, 95–117, doi: 10.1146/annurev.an.24.100195.000523.
- Mol, A. (2002) *The body multiple: ontology in medical practice*, Durham, NC: DUP.
- Mol, A., I. Moser and J. Pols (eds) (2010) *Care in practice: on tinkering in clinics, homes and farms*, Bielefeld: Transcript.
- Noiriel, G. (1991) *La tyrannie du national: le droit d'asile en Europe, 1793–1993*, Paris: Calmann-Lévy.
- Ong, A. and S. Collier (eds) (2005) *Global assemblages: technology, politics, and ethics as anthropological problems*, Malden, MA: Blackwell.
- Puig de la Bellacasa, M. (2012) "'Nothing comes without its world": thinking with care', *The Sociological Review*, 60 (2), 197–216, doi: 10.1111/j.1467-954X.2012.02070.x.
- Puig de la Bellacasa, M. (2017) *Matters of care: speculative ethics in more than human worlds*, Minneapolis: University of Minnesota Press.
- Rabinow, P., G. E. Marcus, J. D. Faubion and T. Rees (2008) *Designs for an anthropology of the contemporary*, Durham, NC: Duke University Press.
- Ruppert, E. (2011) 'Population objects: interpassive subjects', *Sociology*, 45 (2), 218–33, doi: 10.1177/0038038510394027.
- Ruppert, E., J. Law and M. Savage (2013) 'Reassembling social science methods: the challenge of digital devices', *Theory, Culture and Society*, 30 (4), 22–46, doi: 10.1177/0263276413484941.
- Scheel, S. and E. Ruppert (2019) 'The politics of method: taming the new, making data official', *International Political Sociology*, online, doi: 10.1093/ips/olz009.
- Scheel, S., B. Cakici, F. Grommé, E. Ruppert, V. Takala and F. Ustek-Spilda (2016) 'Transcending methodological nationalism through transversal methods? On the stakes and challenges of collaboration', ARITHMUS working paper 1, doi: 10.13140/RG.2.2.33901.79842.
- Scott, J. C. (1998) *Seeing like a state: how certain schemes to improve the human condition have failed*, New Haven: Yale University Press.
- Star, S. L. and J. R. Griesemer (1989) 'Institutional ecology, "translations" and boundary objects: amateurs and professionals in Berkeley's Museum of Vertebrate Zoology, 1907–39', *Social Studies of Science*, 19 (3), 387–420, doi: 10.1177/030631289019003001.
- Stengers, I. (2010) *Cosmopolitics I (Posthumanities)*, translated by Robert Bononno, Minneapolis: University of Minnesota Press.

- Tsing, A. L. (2005) *Friction: an ethnography of global connection*, Princeton: Princeton University Press.
- Van der Velden, M. (2017) 'Thinking with care: exploring interdisciplinarity in a global research project', presented at the Daughters of Themes Workshop, Kea, Greece, available at: www.smart.uio.no/publications/reports/d2.5.thinking-with-care.pdf.
- Wimmer, A. and N. Glick Schiller (2002) 'Methodological nationalism and beyond: nation-state building, migration and the social sciences', *Global Networks*, 2 (4), 301–34, doi: 10.1111/1471-0374.00043.