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

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Abstract Beck and Sznaider call for 'methodological cosmopolitanism' to transcend methodological nationalism and account for an increasingly cosmopolitanized reality. We take up their challenge by drawing on our experiences doing 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) working against the national order of things. To meet these challenges we reflect on how this method required that we practice three modes of care: thinking with others, tinkering with field notes, and dissenting within.

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

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Introduction

Ulrich Beck and Natan Sznaider (2006) 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 which dissolve traditional analytical dualities of 'the local

and the global, the national and the international, us and them' (383). Importantly, Beck and

other researchers conceive of methodological cosmopolitanism as a much needed response to

the *cosmopolitization* of the world we live in, that is, 'an empirical reorientation […] towards

the social force of emerging cosmopolitan realities' (Beck, Blok, Tyfield and Zhang 2013: 2).

For Beck, methodological cosmopolitanism thus constitutes a conceptual and methodological

adaptation of the social sciences due to empirical developments in a reality 'out there'. Beck's

prime example is climate change to emphasize that 'cosmopolitization 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' (2013: 3). With this emphasis on changes in the world, Beck seeks to distinguish

his 'realistic cosmopolitanism' or 'cosmopolitan realism' (Beck and Sznaider 2006: 382) from

traditional versions of normative or philosophical cosmopolitanism (cf. Beck 2004). Beck and

Sznaider 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 21st century 'is becoming the age

of cosmopolitanism', and (3) that we need a methodological cosmopolitanism to account for an

increasingly cosmopolitan reality (2006: 382).

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

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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 do 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, which involved observing conferences and meetings, analysing reports, conducting interviews and engaging in conversations with statisticians across myriad European sites. Amongst 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: 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 program through the conceptual frame of the 'transnational field of statistics', building on Pierre Bourdieu's concept of fields as not formed 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 amongst researchers who have to manage their relations to each other and various technologies. We recognised some of

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these requirements from the outset, such as the need to use collaborative digital resources (e.g. 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 characterizing collaborative research. We describe how thinking, tinkering and dissenting were required to collaborate, but also to establish and maintain the situated relations which 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 Sznaider's realist ontology. In their elaboration of methodological cosmopolitanism, Beck and Sznaider make a distinction between 'the actor perspective of society and politics and the observer perspective of the social sciences' (2006: 397). 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 not only multiple perspectives are adopted, but also set into relation to each other as relational patterns like 'global-local' or 'global-national' (2006: 397–398). 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.

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In contrast, we first conceive of methods as performative devices with ontological effects (Latour and Woolgar 1979; Law 2004; Mol 2002; Ruppert, Law and Savage 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. For 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). Ontological politics are thus guided by the question of what kinds of realities we want to enact and strengthen through methods.

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, cosmopolitization 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

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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' (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 (e.g. 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 (e.g. 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, requires 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 to 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 propose experimenting with alternative spaces, structures and processes as 'research units' (2006: 395), 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 project we also sought to overcome methodological nationalism with an alternative conceptual frame but through that of 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, the dynamics and configuration of the field are not formed by particular actors (like individual professionals or institutions) or spatial scales (like the national or the transnational) but by the 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 elaborated by Bourdieu, actors do this by mobilizing and accumulating different forms of capital (cultural, economic, social and symbolic). Importantly, he emphasized 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 not only discourses but also relations with technological forms that travel and establish associations across sites, such as such as formulas, models, standards and visualizations (Grommé, Ruppert and Cakici 2018).

In sum, our ontopolitical stance is to enact a transnational field of statistics where the field – in distinction to 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 (e.g., institution) or scale (e.g., international) (Bigo 2011: 235).

Based on this understanding of practices our corresponding research method was defined as transversal in at least five senses. First, the method aims to follow statistical practices across a range of scales and sites and is, therefore, transversal insofar as it is multi-sited and cross-scalar (Marcus 1995). To do so 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 required to traverse the practices that put statisticians and sites into relation with each other. These practices range from writing reports to designing algorithms and making conference calls. Second, the method transcends the distinction between the discursive and the non-discursive since statistical practices involve not only discourse but material and technological work such as data cleaning, modelling and visualization. Hence, following practices means to also follow relations to technologies and to trace 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 myriad research techniques (interviews, focus groups, shadowing, participant observation, etc.) not only because the practices being followed are diverse, but 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 calls, in turn, for a team of researchers with complementary skills that traverse 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 whose negotiation and balancing demands, first and foremost, what we came to define as care.

Collaboration and care in a transversal method

While we identified collaboration as essential to undertake our version of a transversal method, making it work is easier said than done as many research projects have documented (e.g., Centellas, Smardon and Fifield 2014; Rabinow et al. 2008). Collaboration in practice emerges as a multi-faceted challenge that concerns all stages of research, from the organization of multi-sited fieldwork and identification of research themes to collaborative analysis and writing such as that which went into this article. It therefore involves a wide range of negotiations concerning questions such as the rather banal like the kind of platforms and research tools chosen (repositories, software, databases etc.), to the degree of standardization of working practices and common understanding 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 relations to each other as well as with various

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technologies (like software) that come with their own requirements, complexities, affordances and so forth.

It is with regard to such issues that we identified care as an integral element of a transversal method that involves collaboration amongst researchers. We came to this by drawing on work by 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 Joan Tronto and Berenice Fisher'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*' (Tronto 1993: 110; cited in: Puig de la Bellacasa 2017, 10; italics in original). What this definition highlights is that caring concerns the creation and fostering of relations. Hence, to think and do research with care is an 'ontological requirement of relational worlds' (2012: 199), which is not reducible to a single normative stance or ethical commitment but 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 Bellacasa captures this well when she underlines that 'creating knowledge is a relational practice' (2012: 199) that is only possible through a web of relations between artefacts, concepts, inscription devices, canonical knowledge, co-researchers, research participants, funding bodies, etc. Hence, thinking becomes only conceivable as 'thinking with' (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 which 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 seriously the ontological imperative of caring for our relations to other team members and their concerns, interests and needs, collaboration risks degenerating into a means for 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, Franssen, Sørensen and Rijcke, 2017)

Conversely, Puig de la Bellacasa's understanding of care is an important reminder to *not* use care 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 (2017). Equally important is that 'caring and being cared for is not necessarily rewarding or comforting' (2012: 198–199). 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 to not only our relations to each other but with material and technological things such as 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 up to mean that caring does not necessarily involve smoothing out differences arising from different disciplinary and cultural backgrounds. It rather calls for a mode of caring that involves forming 'unnatural alliances' to build common concerns (2017: 79).

Before discussing what these aspects of care specifically meant for our transversal method, we will outline how they emerged from collaborative research practices we initially organised. Each of us undertook field work at different European statistical institutes, related

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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 field work 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 field work 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. Additionally, we agreed to hold regular team meetings to discuss field work experiences, secondary literature, and research outputs and to also organise workshops with other researchers on topics of mutual interest (e.g. classification). All of these organised practices were accompanied by regular informal meetings in our shared office space 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, organised 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' (The Center for Ethnography, UCI, 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).

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While the specificities of this and the other collaborative practices mentioned above demanded much attention, the care work they necessitated was implicit rather that 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 constitute nevertheless – 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. Francisca often introduced herself, at the 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 had a role 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 not coordinated set of email communications between Evelyn and a statistician at the NSI where Francisca was doing fieldwork. Finally, some topics of conversation travelled 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 within a single NSI, their 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 to be mainly attuned to writing and analytic practices, its relational understanding applies to how fieldwork also involves thinking in connection to others.

This was well illustrated by the way that topics of conversation, research interests, and new ideas developed between researchers and field sites, as was the case for the Caribbean Netherlands. To work across fields and to develop shared orientations also required carrying awareness of disciplinary sensitivities and theoretical resources across disciplines, countries and interests. For instance, Francisca and Stephan come from different disciplinary backgrounds (Francisca orients more to STS and Stephan to politics and migration studies) but make each other aware of 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 our 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 on not only accessing each other's disciplines but also shaping common understandings.

A second aspect we highlight are the references Francisca made to the journal edited by Evelyn. Beyond facilitating fieldwork access, the journal was an object that established connections between ourselves and our research subjects who both followed and published articles in it. In this way, our connections were not detached from but shaped our objects and subjects of study. The journal 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 into being a transnational field in which researchers and statisticians all take part; this is one sense in which 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 with different backgrounds working at different field sites. Controlling for time, language, financial and other possible differences, research done by a single researcher would not yield similar 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

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into existence was a relation as 'something that passes between [the two] which is neither in one nor the other' (Deleuze and Parnet 1987, 10, cited in Puig de la Bellacasa 2017, 76).

Our experiences thus complicated models of the 'individual project', which assume that 'interpretive and authorial virtuosity is the mainspring of good work' (Collier, Lakoff and Rabinow 2006: 1). Even though arguments in favour of acknowledging research and writing as collaborative acts have been made frequently, 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, which are the products 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 toward greater openness and sharing of research outputs. However, many of those discussions do 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 for researchers in 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 relation we enter or mark each instance where 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 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 (e.g., a meeting), language of the field site, date and so on. And we created a structured database using NVivo 10 software that 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, if any, background information about a field site and topics of interest amongst us, we wanted to know how comprehendible 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) that involves filtering, evaluating, interpreting and analysing the situated practices of statisticians. A deceptively simple practice in the hands of 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 focussed 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 was fully translated into English by the same researcher. The third researcher conducted his fieldwork in English, but this was not the spoken language of his site. Before the experiment, we all expressed concerns about what others would think about the length, details, comprehendibility and coverage of relevant situational information recorded in our field notes. That is, how we interpreted and adjusted agreed upon conventions for doing field notes would be open to the scrutiny of others, making us vulnerable as the details of how we practiced 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 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 (Haraway cited in Puig de la Bellacasa 2017: 82).

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; it requires a constant reworking of the relations with research subjects and artefacts to make these collaborations function as good 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 as a mode of care in feminist science studies (Mol, Moser and Pols 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 interpreted and adjusted often '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 as to 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.

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Second, tinkering refers to how we came to relate to each other and 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. The sharing of field notes thus transformed into treating our differences not as weaknesses to be resolved by further standardisation. Rather, differences became catalysts as they required keeping situated relations in the field and our translation work in sight through the back-and-forth engagements and discussions they demanded between us.

This understanding of collaboration recognizes the need to maintain protocols and a common understanding of research objects, while at the same time facilitating the 'need for argument' (Star and Griesemer 1989, 409). In their work about collaboration amongst diverse researchers and practitioners, Susan Leigh Star and James Griesemer (1989) point out that such work needs 'method standardization' to reconcile different research practices. However, they argue that this does not require resorting to consensus. For them, heterogeneity and cooperation can and do co-exist and the challenge is to define standards for practices that can vary while being sufficiently robust to maintain a 'common identity' (393).[4] For our practice of field notes, we suggest that while heterogeneity sometimes inhibited collaboration, it also made it possible to 'overcome conventionality' and 'argue with other parts of science' (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 given that much of our analytic 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 will preserve our relations to each other and understanding that the knowledge we create is a relational practice will be an ongoing challenge.

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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 which 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 which acknowledges that we are embedded within worlds (and communities) we would rather not endorse but preferably critique and change. In relation to our fieldwork, we take this up to mean how our ideas and positions in academic debates are partial and situated as they emerge from our different academic traditions and the debates we engage with. For us dissenting within also emphasizes our different positionalities with regard to the national cultures we do research in. 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 the creation of '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.

Whilst in the field we recognized that our research was affected by 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'.[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 form of national cultures, language capacities etc. – may affect our research practices and thus undermine our efforts to move beyond methodological nationalism. Stephan and Ville explored this through semi-structured interviews they conducted with other team members who were asked to elaborate on situations where they experienced their positionality (e.g., language capacities or familiarity with the bureaucratic culture) as advantageous or disadvantageous in terms of field access and methods available.

Interestingly, the advantages mentioned by researchers familiar with the national culture of their field site largely mirrored the disadvantages cited by those lacking this familiarity: 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] This 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 due to this familiarity, 'people relate to you a lot easier'. Those who lacked this familiarity reported in turn how a 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 on 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 not only described as entirely disadvantageous. In fact, the notion of dissenting within allows us to consider the alleged (dis)advantages 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. Two researchers stated, for example, that their status as relative 'outsiders' at their NSI field sites was liberating insofar as it granted 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 as equally or even more important than (non-) familiarity 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 important factors having an impact on their field work possibilities 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 multifarious and shifting entanglements in a web of intersecting power relations cannot be captured by neat insider/outsider binaries. Rather, it appears as 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) has 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 (on this point see also: Gupta and Ferguson 1997) our positionality should 'not be problematized but turned into a strategy where difference opens up the possibility of knowing

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and understanding differently'. This position resonates with Puig de la Bellacasa's stance that 'thinking with care compels us to think from the perspective of how cuts foster relationships rather than by how they disconnect worlds' (2017: 78). From this perspective, a researcher's non-familiarity with her field site's national-cultural context do not constitute insurmountable obstacles. They are starting points 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 local bureaucratic cultures implicated, for instance, 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 (on this point see also: Cons 2014), this unnatural alliance nevertheless resulted in a productive collaboration and interesting research constellations. It affected, for instance, the construction of the 'field' as it forced Stephan to reflect on his research priorities at an early stage, so he could instruct the research assistant about topics to focus on when taking notes of statisticians' discussions. The strategy to make our differential inclusion in intersecting power relationships productive (rather than bemoaning the difficulties it implies) constitutes, in our view, the best way forward to enact a transversal method that is capable of challenging the weight of the national order of things. This becomes apparent if one acknowledges that the alternative – to only deploy researchers who have been socialized in the national-cultural context of their field sites – constitutes a form of methodological nationalism in itself, a form that Roger Brubaker calls 'groupism': the tendency to conceive of groups along national lines as 'internally homogeneous and externally bounded entities' and 'fundamental units of social analysis' (2002: 164). Instead, the formation of unnatural alliances, while not devoid of

hierarchies, tensions and divergent positions, potentially destabilize 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' one cares for (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 ethico-professional. Regarding the latter, as noted, 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 depart from other types of ethics previously articulated in relation to cosmopolitization,

such as choosing which normative issues to address (e.g. how to write about the effects of late capitalism, see Beck and Grande 2010).

At the same time, the professional ethics discussed in this paper are very much connected to the ontopolitical stance that we began with – that our methods are entangled with the enactment of the phenomena we seek to represent. Such a stance means to also care about the kinds of realities we enact and strengthen through our methods. For us, this means to enact a transnational field of statistics as the outcome of power struggles between actors performed through their practices and relations to each other and technologies. We have engaged this method in other publications that 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 or regional (e.g. 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 forthcoming 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 national matters or concerns, the legitimation of methodological innovations happened through practices that circulated and traversed political, professional and geographic boundaries. Those practices and struggles were understood as one set amongst 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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Acknowledgments

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 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 organisations (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 of maintaining a common 'identity' across practices that they identify, but which we do not address here, is the 'boundary object' such as definitions.

[5] By problematizing how the (non-)familiarity of researchers 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' as 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 whose mastery is based on experience and which are therefore 'exceptionally difficult to teach apart from engaging in the activity itself' (Scott 1998: 313).

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