

Peopling Europe through Data Practices: Introduction to the Special Issue

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Abstract

Politically, Europe has been unable to address itself to a constituted polity and people as more than an agglomeration of nation-states. From the resurgence of nationalisms to the crisis of the single currency and the unprecedented decision of a member state to leave the European Union (EU), core questions about the future of Europe have been rearticulated: Who are the people of Europe? Is there a European identity? What does it mean to say, “I am European?” Where does Europe begin and end? and Who can legitimately claim to be a part of a “European” people? The special issue (SI) seeks to contest dominant framings of the question “Who are the people of Europe?” as only a matter of government policies, electoral campaigns, or parliamentary debates. Instead, the contributions start from the assumption that answers to this question exist in data practices where

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people are addressed, framed, known, and governed as European. The central argument of this SI is that it is through data practices that the EU seeks to simultaneously constitute its population as a knowable, governable entity, and as a distinct form of peoplehood where common personhood is more important than differences.

Keywords

data practices, Europe, enactment

Peopling Europe

Politically, Europe has been unable to address itself to a constituted polity and people as more than an agglomeration of nation-states. From the resurgence of nationalisms to the crisis of the single currency and the unprecedented decision of a member state to leave the European Union (EU), core questions about the future of Europe have been rearticulated: Who are the people of Europe? Is there a European identity? What does it mean to say, “I am European?” Where does Europe begin and end? and Who can legitimately claim to be a part of a “European” people? This special issue (SI) seeks to contest dominant framings of the question, “Who are the people of Europe?” as only a matter of government policies, electoral campaigns, or parliamentary debates. Instead, the contributions start from the assumption that answers to this question exist only in the multiple, with many answers located in data practices where people are addressed, framed, known, and governed as European. For that reason, when we refer to *Europe* or *European*, we do so in relation to how they are constituted by specific practices.

The central argument of this SI is that it is through data practices that the EU seeks to simultaneously constitute its population as a knowable, governable entity, and as a distinct form of peoplehood (Lie 2004) where common personhood is more important than differences (Porter 1986). Data practices, such as counting, calculating, cleaning, editing, extrapolating, ignoring, harmonizing, and so forth, enact Europe both as a population (and thus an object of government and biopolitical interventions that seek to optimize its health, wealth, and economic productivity, Foucault 2009) and a distinct people and “imagined community” (Anderson 2006) of solidarity and shared history and values. For states, the dominant commonality is that the people are within their territory and thus under their control (Scott 1998). Historically, this determination has been based on the conception of the

people as an immobile, sedentary, and enclosed body politic within a territory (Isin 2018).

These two dimensions—of peoplehood and a population to be governed—are captured in an objective of the European Parliament’s (EP) statistical program (2013–2017) called a “Peoples Europe”:

European citizens are at the heart of Union policies. Consequently, social statistics in the broad sense are in heavy demand to support the decision-making process and to monitor the outcome of social policies, but also to help European citizens assess the impact of those policies on their lives and well-being. (EP and Council 2013, 3.2)

It is an understanding echoed in other important policy documents related to statistics such as the so-called Stiglitz report. The report summarizes findings of the *Commission on the Measurement of Economic Performance and Social Progress*, which was chaired by the economist and Nobel Prize winner Joseph Stiglitz. In brief, the commission had been tasked with finding alternative statistical indicators for economic performance and social progress that could possibly replace the much-critiqued gross domestic product. In the introduction to the report, Stiglitz, Sen, and Fitoussi (2009) emphasize:

[W]hat we measure shapes what we collectively strive to pursue—and what we pursue determines what we measure—the report and its implementation may have a significant impact on the way in which our societies looks [*sic*] at themselves and, therefore, on the way in which policies are designed, implemented and assessed. (p. 9).

As these quotes suggest, people are conceived as both objects and subjects of population knowledge: objects who are counted and acted upon through governing interventions, on one hand, but also subjects who can recognize themselves in accounts of who they are and how they are governed. Historically, it is through data practices that numbers and nationhood have been connected (Patriarca 2002; Loveman 2014), and states have sought to make people “singular” and “legible” (Scott 1998). Along with standardized measurements, institutions, taxation, market regulations, maps, museums, and so on, both censuses and surveys (Law 2009; Savage 2010) have been crucial practices for forging national narratives (Anderson 2006; Best 2009; Kertzer and Arel 2002). Statistical knowledge and related data practices have been central in this regard as they make individual

variation disappear in means, distributions, and large numbers. In these ways, statistics make it possible to identify patterns, such as an “age curve,” and objects of intervention, such as “life expectancy,” that have historically been calculated within national and now European frames (Desrosières 1998; Hacking 1990; Porter 1986; Murphy 2017).

As such, both cultivating recognition and governing a people involve specific practices and, in particular, knowledge practices. For that reason, we do not use “peopling” to refer to the people who come to settle in and populate a nation (see Bailyn 2012) but rather to connote that the act of peopling involves cumulative data practices that bring a people into being as intelligible objects of government and matters of concern. This emphasis on data and knowledge practices also invests peopling with a new meaning beyond traditional understandings as the settling and physical relocation of populations, which has been part and parcel of often highly violent and brutal processes of colonization (Bailyn 2012). Linking the notion of peopling with the idea of data practices highlights, in contrast, how indispensable the production of numerical facts and related data practices are for enacting people as both legible and (from a state perspective) actionable and governable populations (Scott 1998) and “imagined communities” (Anderson 2006) that may be framed in regional, national, European, and so on, terms.

This is a second major precept of this SI: data practices do not simply reflect populations that already exist out there; they also, or perhaps instead, help to constitute them. Briefly, we start from two interrelated propositions. First, the production, analysis, and circulation of data, that is, data practices, play a central role in peopling because data help to enact the populations and kinds of people they seek to know and describe. Moreover, data are invested with socioeconomic interests, concerns of governments, and political agendas (Law, Ruppert, and Savage 2011; Ruppert, Law, and Savage 2013). If we reflect on the genealogy of statistics and now big data analytics, it is clear that data practices have emerged not because they satisfy curiosities but because they have been useful for the purposes of governing or commerce. The concept of enactment implies, furthermore, that data practices are part of ongoing processes in which populations are “always in formation” (Mol 2002; Ruppert 2011). It also implies that enactments are not necessarily the intended products of the practices of actors but rather as the mutable, and in many cases contested, momentary outcomes of the coming together, negotiation, and constant reconfiguration of data infrastructures, technological devices, political concerns, techniques of government, including their adjustments, improvisations, and innovations.

Moreover, data are not only “captured from the world, but in turn do work in the world” (Kitchin 2014, p.21). The acknowledgment of the performative potential of data practices thus requires situated analyses that attend to the specific devices, people, techniques, regulations, methods, infrastructures, and mechanisms through which the population and people of Europe are enacted.

However, engaging in a situated analysis of data practices does not mean shying away from broader, politically contested issues and questions. Data practices are not separate from political struggles; they are an integral part of them. For instance, categories used in population statistics, such as “person with migration background,” are also social categories that enact visions of a national or European identity, effectively operating as sites of struggle in the politics of belonging (Elrick and Farah Schwartzman 2015). Apprehending the technical details of government information systems, such as population registers, requires understanding them as sites of broader institutional transformations as well as battlegrounds of power struggles (Pelizza 2016). Similarly, studying how race operates as an “absent presence” in technological devices and bureaucratic procedures highlights how racialized identities in Europe are produced (M’charek, Schramm, and Skinner 2014). As we outline below, to investigate data practices is to interrogate and intervene in such political questions including the one that inspired this SI: “Who are the people of Europe?”

Origins of the SI

The contributions to this SI originate from a workshop on “Peopling Europe through Data Practices” organized by the ARITHMUS project.¹ The workshop was held in March 2017 at the *Tate Exchange* in London in the context of the program “Who are we?”² What the workshop and its larger research program share is a concern for the multiple crises of identity and belonging in Europe. The program provocatively captured this in its adoption of the following passage from a poem by W.H. Auden:

In the nightmare of the dark
All the dogs of Europe bark
And the living nations wait
Each sequestered in its hate.³

The poem was written at the onset of the Second World War and adopted by the “Who are we?” program to reflect on a moment of political turmoil in which a more violent future could unfold in the face of such developments as the resurgence of nationalism, right-wing populism, and anti-Muslim racism. At the time of the workshop, this resurgence was epitomized by the authoritarianism and nativism expressed in the general election in the Netherlands, the UK Brexit referendum, and the policies of autocratic governments in Poland, Hungary, and Slovakia. At the same time, the program sought to promote the prospect of a more hopeful vision of Europe, a future postnational Europe where the people of Europe no longer primarily define themselves in terms of national belonging and “sequestered in hate.” Importantly—and this was a key political point of the workshop—to envision a postnational Europe means to enact it through specific practices not reducible to building the material infrastructures of an emerging European polity (Schipper and Schot 2011; Misa and Schot 2005). They also include the data practices through which the people of Europe are brought into being. This means we must “wash away the assumption that there is a reality out there beyond practice that is independent, definite, singular, coherent and prior to that practice” (Law 2012, 171). It means that different data practices can enact the people of Europe in different ways and thus different versions of Europe and Europeans are possible. What we are confronted with then is what Mol (2002) has called *ontopolitics* or *ontological politics*: the people of Europe could and perhaps should be enacted differently. As contributions to this SI suggest, such enactments should be treated as objects of contestation and dissent rather than as the product of data practices that reflect already existing realities.

Hence, engaging in situated analyses of data practices means confronting big political questions revolving around Europe, treating the different practices through which the people of Europe are brought into being as political struggles over questions such as “Who are the people of Europe?” Is it possible (or even desirable) to conceive of something like a European identity in the singular? How are the boundaries of Europe, understood as a people, constituted in different sites and what kind of practices are mobilized? If Europe is to be more than a geographical marker, how might it be conceived as a contested polity?

The workshop brought together researchers to consider the data practices they study as entry points to discuss and intervene in these pressing political questions. The contributions to the workshop that resulted in this SI discuss data practices involved in governing education, health, citizenship, residence, and social policy.⁴ In this way, the articles show that questions of

migration and Othering are not confined to practices specifically concerned with the measurement or management of migration; they are ever present in data practices that seek to answer the question asked by the Tate program: “Who are we?”

Theoretically, the SI begins with the adoption of enactment as the key lens through which data practices are interpreted as we have outlined above. Additionally, the contributions share a specification of the meaning of data practices that we set out in the next section.

Data Practices

The concept of enactment brings attention to the performative and political dimensions of the data practices involved in bringing a population into being as a reality to be governed. In Law’s (2012) words “if we want to understand how realities are done or to explore their politics, then we have to attend carefully to practices and ask how they work” (p. 157). Such an understanding is advanced in what is referred to as “practice theories” in the social sciences (Gad and Jensen 2014; Schatzki 2001). While recognizing that there are many theories and no unified approach to practices, Schatzki (2001) maintains that a central core is a conception of practices as “embodied, materially mediated arrays of human activity centrally organized around shared practical understanding” and “occur within and are aspects or components of the field of practices” (pp. 10-11). What this core conception highlights is that practices are not merely techniques or technical operations. Rather, they are *activities* performed by humans in relation to materials, technologies, and shared understandings and occur within specific fields. Put differently, practices always involve a *doing* and put sociotechnical arrangements to use that only come to matter by being used in practice. This is also implicitly or explicitly conveyed in scholarly work that refers to data practices as the generation, editing, collecting, cleaning, and analysis of data (Gabrys et al. 2016; Garnett 2017; Leahey 2008; Leonelli 2016). From the judgments and tacit knowledge of practitioners to the rules, standards, and struggles within a community of practice and the affordances and constraints of technologies, data practices are understood not as mere techniques but activities that involve numerous elements and relations.

These understandings of practices have been variously elaborated in concepts developed in the social sciences. In what follows, we briefly identify those concepts with which the articles in this SI directly engage in their analyses of data practices. Taken together, they show the diversity

of data practices that enact the people of Europe. Each attends to how data practices *enact* populations as defined above. They then variably examine how those practices are *situated* in and produced by sets of relations; *socio-technical* in that they involve relations between humans, materials, infrastructures, and technologies; *performed* by actors and function as stakes in struggles over authority and power within specific professional fields of practice; and *contingent* in that they do not have a “prior and determinate form” (Law 2004, 38) but involve practical adjustments to address complex and changing conditions.

Along these lines, Helene Ratner analyzes the standardized testing of students as a form of Europeanization. Closely attending to methods used in Danish student test assessment, Ratner shows how three different standardized scales—the norm scale, grading scale, and criteria scale—*enact* different student subjects and population objects. She argues that it is through such scales that student populations get categorized as “normal,” “deviant,” or “risky” objects of government. She attends to how these scales enact and organize a European student population in relation to time and ethnicity (Danish/non-Danish). Regarding the latter, Ratner argues that standardized testing also enacts the European Other as a population requiring additional government attention.

Francisca Grommé and Evelyn Ruppert examine how new technological infrastructures of the European Statistical System seek to integrate national census data through “cubes” of cross-tabulated social topics and spatial “grids” of maps to enact European populations. They highlight how the data practices that make up these infrastructures are performed by statisticians who are part of a transversal field of power where scales of the local, the national, and the transnational overlap and intersect. In that way, they complicate what then constitutes national or European data and populations. Rather than given and predetermined, they show the *contingent* effects of the sociotechnical arrangements that make up these infrastructures. This, they argue, is because grids and cubes twist and fold the data produced by myriad statistical methods and technological practices of standardization, which they refer to as “methodological topologies.” So, while standardized forms and procedures seek to harmonize national census data, their analysis shows that what is enacted as European does not have a prior and determinate form but is a contingent accomplishment.

Annalisa Pelizza argues how data infrastructures and knowledge practices *enact* not only individual Others but also new bureaucratic orders involving European actors as well as distinctive understandings of Europe. Drawing on ethnographic fieldwork at disembarkation ports and

registration and identification facilities in Italy and Greece, she shows how practices are located in and produced by sets of *situated* relations (Haraway 1988; Law 2004; Mol 2002). This is evident in the variable and complex geography of access that different sites and personnel have to information systems and databases. One consequence is that different procedures compete to legitimize different sets of actors, data, and metadata as more authoritative than others, with consequences for how Europe is understood and governed. The applicants themselves also perform legibility and legitimacy by proposing alternative chains of data in the form of family books, school titles, and language certificates, among others. Pelizza concludes that the notion of “alterity processing” helps us analyze the coproduction of individual Others and European polities by paying attention to *sociotechnical* relations designed to produce “European-legible” identities.

Funda Ustek-Spilda attends to how statisticians act as “backstage policy makers” as they exercise discretion through multiple methodological decisions when operationalizing abstract statistical guidelines and definitions. In this way, they effectively make rather than merely implement policies. Importantly, their discretion needs to be reconceived as *sociotechnical* in order to highlight that it is exercised in relation to the constraints and affordances of technologies as well as the decisions of other bureaucrats. Through a focus on the inclusion/exclusion of refugees and asylum seekers as part of the usual resident population of Europe, Funda Ustek-Spilda discusses the adaptations and adjustments statisticians make as a result of the particular methods of their national contexts, the data to which they have access, and national laws and regulations. The result is that, while an international standard establishes that asylum seekers and refugees be included as part of the usual resident population, when applied, more countries exclude asylum seekers than include them. In these ways, Ustek-Spilda shows how data practices involve a “more or less messy set of practical contingencies” (Law 2004, 13) when international definitions come to be implemented in varying national contexts.

Finally, Gabriel Blouin-Genest analyzes the politics of evidence in the European Core Health Indicators (ECHI) database. Through a close reading of the health indicators included in the database, he demonstrates how the absence of certain categories (e.g., migrant health, environmental health risks) and the high visibility of a neoliberal health framework *enact* European health through data. He discusses how ECHI data conceive health in terms of its impacts on the economy, and how they focus interventions on individual choice. Blouin-Genest concludes that the ECHI data acquire validity by being reproduced through the circulation of publications and

ultimately change the field of health practice by defining what it means to be a healthy European. In this way, his contribution exemplifies a core theme of the SI: the way data practices enact a European population shapes the logics of how the people of Europe are governed.

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Notes

1. The ARITHMUS project studied how methodological changes in the production of population statistics within the European Union have consequences for the enactment of populations as objects of government. The project principal investigator was Professor Evelyn Ruppert (Goldsmiths, University of London) and included postdoctoral researchers Baki Cakici, Francisca Grommé, Stephan Scheel, and Funda Ustek-Spilda and doctoral researcher Ville Takala.
2. The event involved a week of engagement, dialogue, and debate among artists, academics, and activists who addressed the question of Who are we? For more information, see <https://www.tate.org.uk/whats-on/tate-modern/tate-exchange/workshop/who-are-we/> (accessed January 16, 2019).
3. "In Memory of W. B. Yeats" (Auden 1940).
4. Perhaps unsurprisingly, in relation to these questions, many workshop papers addressed migration-related data practices, which we have assembled in another special issue on *Enacting Migration through Data Practices*. The articles in that special issue show that the conundrum of a European identity is, to date, mostly answered by enacting Europe's imagined Others (Scheel, Ruppert, and Ustek-Spilda 2019).

References

- Anderson, Benedict. 2006. *Imagined Communities: Reflections on the Origin and Spread of Nationalism. Revised and Extended*. London, UK: Verso.
- Auden, W. H. 1940. *Another Time*. New York: Random House.
- Bailyn, Bernard. 2012. *The Barbarous Years: The Peopling of British North America: The Conflict of Civilizations, 1600-1675*. New York: Knopf.
- Best, Heinrich. 2009. "History Matters: Dimensions and Determinants of National Identities among European Populations and Elites." *Europe-Asia Studies* 61 (6): 921-41.
- Desrosières, Alain. 1998. *The Politics of Large Numbers: A History of Statistical Reasoning*. Edited by R. D. Whitley. Cambridge, MA: Harvard University Press.
- Elrick, Jennifer, and Luisa Farah Schwartzman. . 2015. "From Statistical Category to Social Category: Organized Politics and Official Categorizations of 'Persons with a Migration Background' in Germany." *Ethnic and Racial Studies* 38 (9): 1539-56. doi: 10.1080/01419870.2014.996240.
- EP and Council. 2013. Regulation (EC) No 99/2013 of the European Parliament and of the Council of 15 January 2013 on the European Statistical Programme 2013-17.
- Foucault, Michel. 2009. *Security, Territory, Population: Lectures at the Collège De France, 1977-78*. Basingstoke, UK: Palgrave Macmillan.
- Gabrys, Jennifer, Helen Pritchard, and Benjamin Barratt. 2016. "Just Good Enough Data: Figuring Data Citizenships Through Air Pollution Sensing and Data Stories". *Big Data & Society* 3 (2): 1-14. <https://doi.org/10.1177/2053951716679677>.
- Gad, Christopher, and Casper Bruun Jensen. 2014. "The Promises of Practice." *The Sociological Review* 62 (4): 698-718. doi: 10.1111/1467-954X.12200.
- Garnett, Emma. 2017. "Air Pollution in the Making: Multiplicity and Difference in Interdisciplinary Data Practices". *Science, Technology, & Human Values* 42 (5): 901-24. <https://doi.org/10.1177/0162243917699974>.
- Hacking, Ian. 1990. *The Taming of Chance*. New York: Cambridge University Press.
- Haraway, Donna J. 1988. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14 (3): 575-99.
- Inin, Engin. 2018. "Mobile Peoples: Transversal Configurations." *Social Inclusion* 6 (1): 115-23.
- Kertzer, David I., and Dominique Arel. 2002. *Census and Identity: The Politics of Race, Ethnicity, and Language in National Censuses. New Perspectives on Anthropological and Social Demography*. Cambridge, UK: Cambridge University Press.

- Kitchin, Rob. 2014. *The Data Revolution: Big Data, Open Data, Data Infrastructures and Their Consequences*. London, UK: Sage.
- Law, John. 2004. *After Method: Mess in Social Science Research*. New York: Routledge.
- Law, John. 2009. "Seeing Like a Survey." *Cultural Sociology* 3 (2): 239-56.
- Law, John. 2012. "Collateral Realities." In *The Politics of Knowledge*, edited by Fernando Dominguez Rubio and Patrick Baert, 156-78. New York: Routledge.
- Law, John, Evelyn Ruppert, and Mike Savage. 2011. "The Double Social Life of Methods." *CRESC Working Paper Series* 95. ESRC Centre for Research on Socio-Cultural Change (CRESC), Department of Sociology, Faculty of Social Sciences, The Open University, UK.
- Leahey, Erin. 2008. "Overseeing Research Practice: The Case of Data Editing." *Science, Technology, & Human Values* 33 (5): 605-30.
- Leonelli, Sabina. 2016. *Data-Centric Biology*. University of Chicago Press.
- Lie, John. 2004. *Modern Peoplehood*. Cambridge, MA: Harvard University Press.
- Loveman, Mara. 2014. *National Colors: Racial Classification and the State in Latin America*. Oxford: Oxford University Press.
- M'charek, Amade, Katharina Schramm, and David Skinner. 2014. "Topologies of Race: Doing Territory, Population and Identity in Europe." *Science, Technology, & Human Values* 39 (4): 468-87. doi: 10.1177/0162243913509493.
- Misa, Thomas J., and Johan Schot. 2005. "Introduction: Inventing Europe—Technology and the Hidden Integration of Europe." *History and Technology* 21 (1): 1-19. doi: 10.1080/07341510500037487.
- Mol, Annemarie. 2002. *The Body Multiple: Ontology in Medical Practice*. Durham, NC: Duke University Press.
- Murphy, Michelle. 2017. *The Economization of Life*. Durham, NC: Duke University Press Books.
- Patriarca, Silvana. 2002. *Numbers and Nationhood: Writing Statistics in Nineteenth-Century Italy*. Cambridge, MA: Cambridge University Press.
- Pelizza, Annalisa. 2016. "Developing the Vectorial Glance: Infrastructural Inversion for the New Agenda on Government Information Systems." *Science, Technology, & Human Values* 41 (2): 298-321. doi: 10.1177/0162243915597478.
- Porter, Theodore M. 1986. *The Rise of Statistical Thinking, 1820-1900*. Princeton, NJ: Princeton University Press.
- Ruppert, Evelyn. 2011. "Population Objects: Interpassive Subjects." *Sociology* 45 (2): 218-33.
- Ruppert, Evelyn, John Law, and Mike Savage. 2013. "Reassembling Social Science Methods: The Challenge of Digital Devices." *Theory, Culture & Society, Special Issue on "The Social Life of Methods"* 30 (4): 22-46. doi: 10.1177/0263276413484941.

- Savage, Mike. 2010. *Identities and Social Change in Britain since 1940: The Politics of Method*. Oxford, UK: Oxford University Press.
- Schatzki, Theodore R. 2001. "Introduction: Practice Theory." In *The Practice Turn in Contemporary Theory*, edited by Theodore R. Schatzki, Karin D. Knorr-Cetina, and Eike von Savigny, 10-23. London, UK: Routledge.
- Scheel, Stephan, Evelyn Ruppert, and Funda Ustek-Spilda. 2019. "Introduction: Enacting Migration through Data Practices." *Environment and Planning D: Society and Space* 37 (4): 579-88. doi: 10.1177/0263775819865791.
- Schipper, Frank, and Johan Schot. 2011. "Infrastructural Europeanism, or the Project of Building Europe on Infrastructures: An Introduction." *History and Technology* 27 (3): 245-64. doi: 10.1080/07341512.2011.604166.
- Scott, James C. 1998. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven, CT: Yale University Press.
- Stiglitz, Joseph E., Armatya Sen, and Jean-Paul Fitoussi. 2009. *Report by the Commission on the Measurement of Economic Performance and Social Progress*. Paris, France: CMESP. Accessed December 20, 2019. <https://ec.europa.eu/eurostat/documents/8131721/8131772/Stiglitz-Sen-Fitoussi-Commission-report.pdf>.

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