Reimagining government data through the digital arts

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Citizens have a right to actively participate in making knowledge about the societies of which they are a part and opening them to democratic contestation, intervention and reinvention.

Figure 1: How do we know who we are? Early Prototype. Dawid Górny. All rights reserved.

The 'Who Are We?' programme provoked us to intervene in fundamental questions about who decides, classifies and ascribes who are 'we' as Europeans. Our contribution approached these questions in relation to digital technologies and data, which are increasingly part of making up who we are and how we are known by governments, corporations and software and app developers. Our contribution brought together our different interests and approaches to this issue.

For Evelyn, a sociologist, how European Union member states are mobilising new digital technologies and data to innovate statistical practices in order to know the 'European population' is a focus of her current research project, ARITHMUS.

For Dawid, a digital designer, how digital interaction and design enable people to participate in the making of data and visualisations is a concern of his various

projects. We brought our interests together by imagining a digital installation that could respond to a question provoked by the programme: how do we know who we are?

Some initial premises

> **Europe is imagined and visualised as a series of containers of national populations rather than as a space of flows, exchanges and mixing of different peoples that dynamically compose it.**

To move from this question to a design we first formulated two premises. One concerns the relation between the European project in our 'moving times': that the freedom of movement in the EU – one of the pillars of the 1992 Maastricht Treaty – provides the promise of not only free movement and settlement and the making of a single European economy but also the possibility of forging a people as a polity. Yet, the promise of a common space of citizen movement has been countered by increasingly complex and restrictive legal regimes of member states that constrain the movement of immigrants, refugees and asylum seekers. These two legal orders are part of making Europe a morally and politically differentiated space of movements, mixes, and flows of people within and beyond its borders. These conflicting legal orders and tensions between freedom and constraint have arguably articulated a question of 'Who has a right to Europe?' as a defining question of our times.

Of course, Europe has always been a space of movement, as is evident in the massive migrations of people in and out and within Europe during the nineteenth and twentieth centuries. And such movements have also been matters of politics and governing as evident in moral panics reinforcing border regimes and calls for better measuring and counting bodies in our moving times. The ongoing struggle in the UK about the counting and inclusion of international students in migration statistics is a telling example. Moral panics about non-EU students overstaying their entitlement continue despite there being no evidence of this as an issue, as reported in a recent study by the UK Office for National Statistics (ONS). This controversy has revealed how the method of measurement –large-scale exit checks or the International Passenger Survey (IPS) – makes a difference in population numbers reported.

That there are different ways to define, measure, collect, interpret and disseminate population data is also evident in often incommensurate methods that member states use to capture the movement of people in and out of their territories. Debates about these methods typically focus on how they differently address practical problems of counting movement. However, a fundamental source of this practical problem is that settlement and residency constitute the pillars of population statistics and in turn who are the people of nation-states. The movement of people is thus a 'problem' for methods that understand populations as 'stocks' of people and statistics as fixed 'snapshots' of volumes of people contained in and exchanged between the borders of states. This conception is materialised in the dissemination of population statistics in familiar visual forms of tables and histograms (Figure 2). In these ways, Europe is imagined and then visualised as a series of containers of national populations rather than as a space of flows, exchanges and mixing of different peoples that dynamically compose it.

File:Immigration by country of birth, 2015 (¹).png

File File history File usage

	Total immigrants	Native-born		Foreign-born Total		Born in another EU Member State		Born in a non-member country		Unknown	
	(thousands)	(thousands)	(%)	(thousands)	(%)	(thousands)	(%)	(thousands)	(%)	(thousands)	(%)
Belgium	146.6	15.5	10.6	129.9	88.6	55.3	37.7	74.6	50.9	1.2	0.8
Bulgaria	25.2	11.0	43.6	14.2	56.4	1.9	7.6	12.3	48.8	0.0	0.0
Czech Republic	29.6	6.2	21.1	23.4	78.9	11.6	39.3	11.7	39.7	0.0	0.0
Denmark	78.5	15.4	19.6	61.2	77.9	24.1	30.7	37.1	47.2	2.0	2.5
Germany	1 543.8	59.8	3.9	1 440.4	93.3	440.9	28.6	999.4	64.7	43.7	2.8
Estonia	15.4	7.5	48.9	7.9	51.0	3.3	21.7	4.5	29.4	0.0	0.0
Ireland	76.9	19.8	25.8	57.1	74.2	26.0	33.8	31.0	40.4	0.0	0.0
Greece	64.4	26.6	41.2	37.9	58.8	19.1	29.7	18.6	29.1	0.0	0.0
Spain	342.1	30.3	8.9	311.8	91.1	97.8	28.6	214.0	62.5	0.0	0.0
France	363.9	89.4	24.6	274.4	75.4	86.3	23.7	188.1	51.7	0.0	0.0
Croatia	11.7	2.5	21.1	9.2	78.9	2.3	19.8	6.9	59.1	0.0	0.0
Italy	280.1	25.9	9.3	254.1	90.7	56.9	20.3	197.3	70.4	0.0	0.0
Cyprus	15.2	2.9	19.4	12.2	80.6	5.9	38.9	6.3	41.7	0.0	0.0
Latvia	9.5	4.1	43.7	5.3	55.9	1.5	15.5	3.8	40.3	0.0	0.4
Lithuania	22.1	16.3	73.6	5.8	26.4	1.9	8.6	3.9	17.7	0.0	0.0
Luxembourg	23.8	1.2	4.8	22.2	93.2	14.3	59.9	7.9	33.3	0.5	1.9
Hungary	58.3	15.2	26.0	43.2	74.0	15.3	26.2	27.9	47.8	0.0	0.0
Malta	12.8	1.8	13.8	11.1	86.2	5.3	41.4	5.7	44.8	0.0	0.0
Netherlands	166.9	26.6	15.9	140.3	84.1	57.5	34.5	82.8	49.6	0.0	0.0
Austria	166.3	7.7	4.6	155.1	93.3	64.9	39.0	90.2	54.3	3.5	2.1
Poland	218.1	109.2	50.1	105.1	48.2	34.8	15.9	70.3	32.2	3.9	1.8
Portugal	29.9	12.7	42.5	17.2	57.4	7.4	24.8	9.8	32.6	0.0	0.1
Romania	132.8	87.1	65.6	39.8	29.9	13.6	10.2	26.2	19.7	5.9	4.5
Slovenia	15.4	1.9	12.2	13.5	87.8	2.7	17.4	10.8	70.4	0.0	0.0
Slovakia	7.0	0.9	13.4	6.1	86.6	4.7	67.2	1.4	19.4	0.0	0.0
Finland	28.7	5.9	20.6	21.2	73.9	7.3	25.4	13.9	48.5	1.6	5.5
Sweden	134.2	14.6	10.9	119.5	89.0	29.0	21.6	90.5	67.4	0.2	0.1
United Kingdom	631.5	73.0	11.6	558.5	88.4	258.4	40.9	300.1	47.5	0.0	0.0
Iceland	5.6	1.4	25.1	4.2	74.3	3.2	56.2	1.0	18.0	0.0	0.6
Liechtenstein	0.7	0.0	6.4	0.6	93.6	0.3	42.8	0.3	50.8	0.0	0.0
Norway	60.8	4.6	7.5	56.2	92.5	25.8	42.4	30.4	50.0	0.0	0.0
Switzerland	153.6	19.0	12.4	133.7	87.0	82.0	53.4	51.7	33.6	0.9	0.6

Note: the values for the different categories of country of birth may not sum to the total due to rounding.
Source: Eurostat (online data code: migr_imm3ctb)

File:Immigrants, 2015 (per 1 000 inhabitants).png

File File history File usage

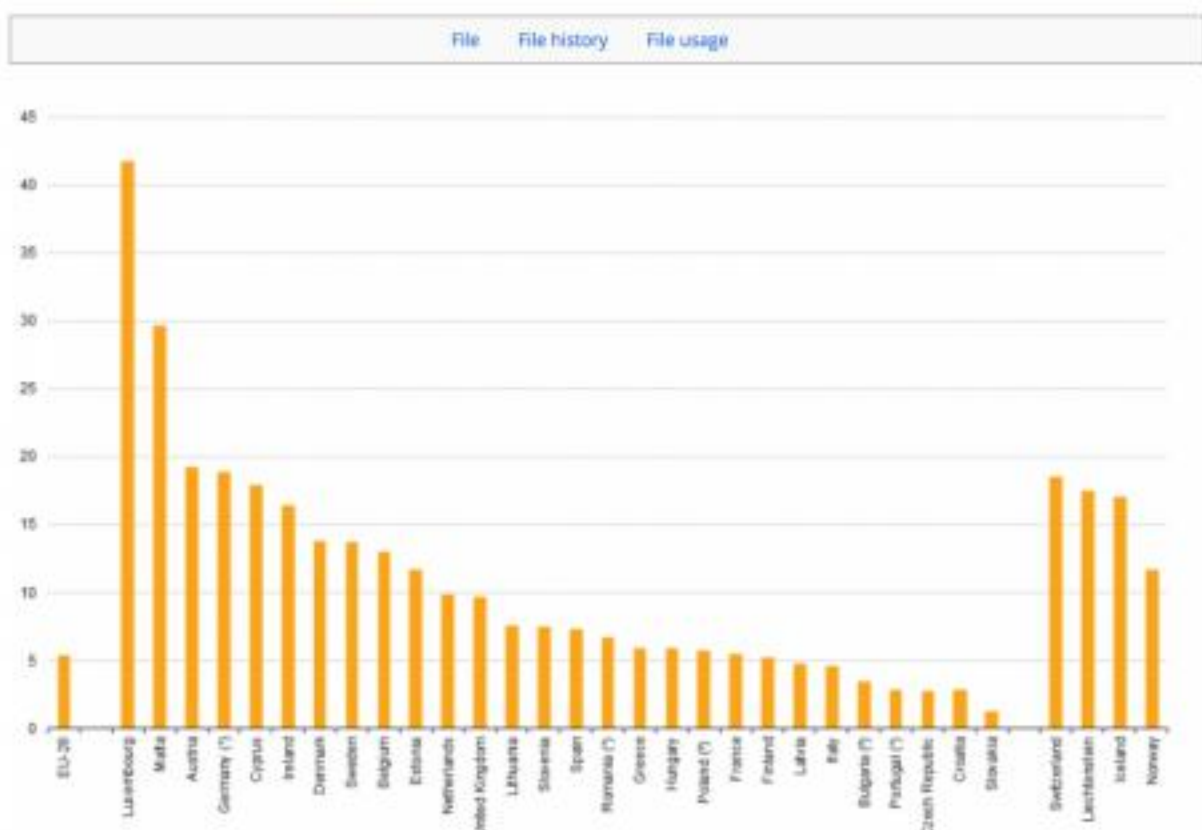

Figure 2: Eurostat Migration Statistics. Source: http://bit.ly/2vTV2KS.

A second premise is that 'how we know who we are' is increasingly mediated by the availability of large volumes of digital data (or Big Data) accumulated through the internet by governments, corporations, and software and app developers. While numerical and textual analyses and representations have been dominant, digital visualisation is increasingly deployed for making sense of Big Data. Both developments are disrupting traditional practices of government data collection (e.g., censuses), statistics (e.g., counts), and modes of representation (charts). Arguably, the state held a near-monopoly over population knowledge for almost two centuries, which is now being challenged by corporate innovations in the digital tracing and visualising of the movements and activities of people. In a time of alternative facts, what constitutes legitimate knowledge and expertise about populations are thus evermore sites of political contention.

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Governments tend to approach this as a competition that they can win through claims about accuracy and quality or by adopting the latest methods of data analysis and visualisation. However, for us, the challenge of alternative facts is

not simply about technique. It concerns the normative and political choices about how to collect, sort, organise, categorise, represent and interpret data. That is, practices that generate statistics are not simple reflections of a who we are as Europeans. Rather, through decisions and choices about what and who counts as European to various techniques of making and analysing data, practices are part of defining Europe. As such, 'how do we know who we are?' is not only a practical but also political question. It also concerns relations to people through which knowledge of societies is generated and legitimated: as unknowing subjects of data collection or as active participants in its making? Indeed, and more fundamentally, what is at stake is the right of citizens to actively participate in making knowledge about societies of which they are a part and opening statistics to democratic contestation, intervention and reinvention.

Translating premises into designs

We translated these two premises into reflexive questions about the relation between the design of our installation and the politics of how we know who we are:

1. How might we explore visualisations as not simple reflections but actively participating in generating political imaginaries of Europe and Europeans?
2. How do visualisations imagine people as passive or active participants in the making and interpretation of how we know who we are?
3. How might visualisations participate in imagining not the movements of 'others' – refugees or asylum seekers - but imagining 'us' or 'Europeans' as already 'moving peoples'?
4. How might visualisations trouble static concepts of Europe as a collection of nations by capturing patterns of movement where borders are not the organising frame?
5. How might visualisations engage people and make explicit that data is a collective accomplishment and imagine another 'we', another Europe?
6. How might the relation between data and visualisations be demonstrated and the ways they perform how we know who we are?

Figure 3: At the Tate Installation. Photo Credit: Evelyn Ruppert. All rights reserved.

Reflecting on our premises and these questions, we designed the installation to reimagine Eurostat migration data from 2008-14 on the country of birth and residence of people included in the European population (see Figure 2). We first visualised the data not as numbers but as different sized and coloured shapes. We referred to these as 'data traces' where the number of shapes reflects volumes and the colours – derived from selfies posted on Instagram – reflect how Europe is made up of a multi-coloured collection of spaces composed by the in-movement of people from different countries.

Movement is visualised as appearing and

In these ways movement is visualised as appearing and disappearing trajectories of lines connecting countries of birth and residence and their multiplication is proportional to the volume of movement from within and beyond Europe.

disappearing trajectories.

'Recomposing' Europe is thus visualised as a series of dynamic multi-coloured spaces and lines that traverse national borders. We then invited visitors to interact with and recompose the visualisation by donating their data traces on country of birth and residence (Figure 3). To 'populate' the anonymous shapes of Europe we invited them to also add their 'data faces.' This involved interacting with an algorithm that generated the outlines of their faces based on a mixture of lines from the topographical borders of their countries of birth and residence. To these the algorithm added coloured shapes based on the mix of their country of birth and residence. In these ways, the data traces and data faces of visitors to the Tate Exchange contributed to reimagining and recomposing Europe.

This is but a summary of how our premises and reflexive questions came to shape our final installation (Figure 4), which involved many iterations. As part of our reflexive practice, we have documented these iterations on a storyboard that specifies in greater detail how the installation was designed and the final version generated. What we want to emphasise here is that to answer to the question 'who are we?' requires simultaneously answering 'how do we know who we are?'

Figure 4: Image from the Final Installation. Dawid Górny. All rights reserved.

This article is published as part of an editorial partnership between openDemocracy, The Open University and Counterpoints Arts to reanimate the Tate Exchange project in which academics and artists together ask who – during a time when the lines marking out citizens, borders and nations are being redrawn, or drawn more starkly – 'we' are, and who gets to decide.

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