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Reflections on a collaboration: How do we know who we are?

Evelyn Ruppert and Dawid Górny

** This is a 4-part essay on how we collaborated to design an interactive installation to visualise Europe as part of the 'Who are We?' programme curated by a group of Tate Exchange Associates, London, UK during the week of 14–19 March 2017.

Part 1 discusses how we approached the question of Who are we? by posing another one related to our interests in big data, digital technologies and visualisation: 'How do we know who we are? as Europeans. Through the example of government migration data, we explore how digital technologies and data are evermore central to narratives about who we are and how we are known.

Fig 1: Final installation

The large volumes of digital data (or Big Data) accumulated through the internet by governments, corporations, and software and app developers have led to visualisation as a key method of social analysis. While numerical and textual analyses and representations have been dominant modes, digital visualisation is increasingly deployed for analysing and interpreting data. One consequence that we engage with here concerns how such visualisations are not simple reflections but

involve normative and political choices about how to reduce, bound, sort, organise, categorise, represent and interpret data.

In particular, we are interested in how developments and experiments in visualising data disrupt traditional practices of government data collection (e.g., surveys, censuses and administrative databases) and statistics (e.g., estimates, forecasts, and indices). Arguably, states have dominated the production of data on whole populations within their territories for almost two centuries. However, this is now being challenged by data produced by the private corporations and technology companies along with innovations in computation and data visualisation. These innovations include tracking and tracing people, their movements and activities and visualising these data. For governments, keeping up with these developments is key to the relevance and legitimacy of data and in turn the statistics they produce. In a time of 'alternative facts', what constitutes legitimate knowledge and expertise are thus evermore becoming sites of political contention and struggle. 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, the challenge of 'alternative facts' is not simply about technique but relations to people through which data, statistics and knowledge are generated and legitimated. More fundamentally at stake is the rights of citizens to be part of shaping knowledge about societies of which they are a part.

Who are we? programme

Fig 2: Who are We Programme

These are some of the questions that inspired our collaboration when we joined 'Who are We?', a programme curated by a group of Tate Exchange Associates at the Tate Exchange, London, UK during the week of 14–19 March 2017. The programme invited artists, designers, activists and academics to collaboratively produce public installations and events that responded to a series of questions related to the

programme theme: What is becoming of Europe and the UK? How do we present or recognise ourselves as collectivities? How does our colonial past connect to today's migratory movements? Can the creative uses of media, technologies, logistics, visual art and performances show us a glimpse of another Europe, another 'We'?

Fig 3: Entrance at Tate Exchange to 'Who are We?'

We approached these questions by posing yet another related to our interests in data and visualisation: 'How do we know who we are?' The programme afforded an opportunity to explore how digital technologies and data are not only influencing innovations in state data production practices but evermore central to telling narratives about who we are and how we are known. From digital data generated by governments on births, deaths, incomes, and migration to data compiled by social media and apps on networks, associations and sentiments, who we are is increasingly being narrated through relations between people and digital technologies.

Fig 4: ARITHMUS (www.arithmus.eu)

In relation to these questions we sought to design a digital installation that would also address a key issue in Evelyn's study of how European Union member states are mobilising new digital technologies and data to innovate statistical practices involved in knowing the European population. Through ARITHMUS she has been examining the politics of how these practices generate statistics that are not a simple reflection of a European population. Rather, through decisions and choices about what and who counts as European to various techniques of defining, compiling and analysing data, practices are part of defining Europe and in turn how it is governed. As such, 'how do we know who we are' is not only a practical question but also political one.
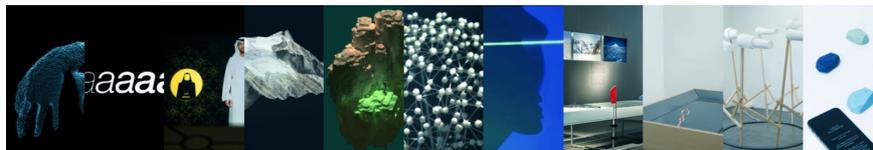

Fig 5: Examples of Górny's Work

At the same time, Dawid was working on various projects on digital interaction and design. For him 'How do we know who we are?' is bound up with how we can or cannot interact with or participate in the making of visualisations. For him, enabling people to experience quite complex and abstract datasets can potentially stimulate curiosity about how data is made and visualised.

The Tate theme called upon us to consider how the politics of movement are implicated in our question. We started from a premise

about the European project in relation to our 'moving times': that the freedom of movement in the EU—one of the pillars of the 1992 Maastricht Treaty—provided 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 without its borders. These conflicting legal orders and tensions between freedom and constraint have arguably articulated 'Who has a right to Europe?' as a defining question of our times.

Of course, Europe has always been a space of movement as 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. But, as Evelyn's study has found, measuring and interpreting those movements is one of the most practical and political challenges of European statistics. Settlement and residency constitute the pillars of population statistics and in turn who are the people of nation-states. Migration is thus not only a practical problem of measurement but also for defining 'who we are.' Member states deploy various and often incommensurate methods such as border surveys, population registers and censuses to try and capture the movement of people into and out of their territories. These efforts involve innumerable decisions about who to count and how to define, measure, compile, interpret and disseminate this data. 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 to remain continue despite no evidence that this as an issue as reported in a 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. The IPS, for example, is noted to be unreliable for calculating the number of illegal overstayers and the Home Office has been accused of sitting on a report showing far fewer overstayers than originally estimated.

For its part, Eurostat, the statistical agency for the EU, has worked with member states to develop standards for harmonising this data and then assembling it into one European population. The results are then

reported on Eurostat's dissemination platform in familiar visual forms of tables and histograms:
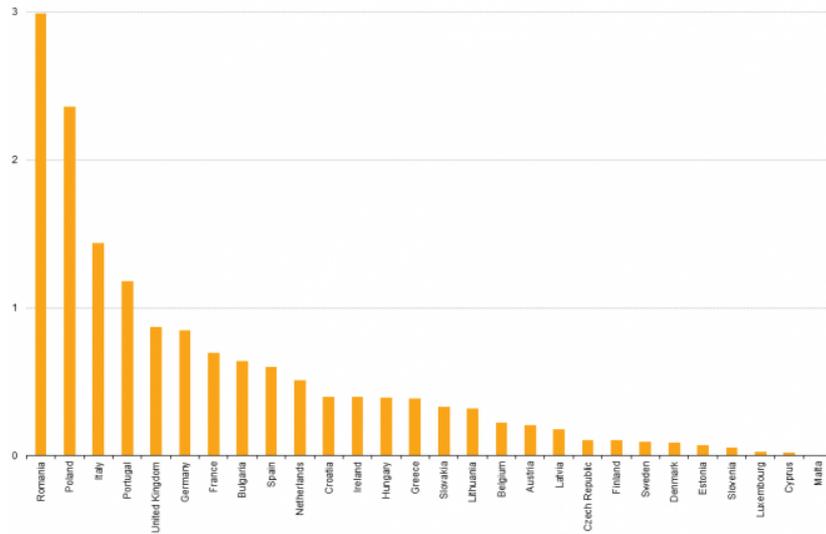
Note: Cyprus and Malta have not provided detailed data by individual EU citizenship. The United Kingdom and Spain have provided detailed data by individual EU citizenship only for the most numerous ones.
Source: Eurostat (online data code: migr_pop1ctz)

	Total immigrants (thousands)	Native-born (thousands)	(%)	Foreign-born Total (thousands)	(%)	Born in another EU Member State (thousands)	(%)	Born in a non-member country (thousands)	(%)	Unknown (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	18.8	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)

Fig 6: Eurostat Tables and Histograms (Source: http://bit.ly/2vTV2KS)

Evelyn's study investigates the practices and politics involved in making these kinds of visualisations, while Dawid's design work concerns how these visualisations fail to engage with the possibilities of new digital technologies and are especially unsuitable for public dissemination. Instead, they are interfaces that close off opportunities for people to interact and participate in them. As with many government data initiatives, disseminating data alone does not make data accessible or interpretable.

*How then might we visualise Europe differently? This is a question we take up in **Part 2** which outlines how we brought our different interests together to develop six interrelated conceptual and design questions to guide how we might visualise Europe differently.*

Following from the issues we outlined in Part 1, we considered how a digital installation could be designed to visualise Europe differently. We started by collaborating interrelated conceptual and design questions to guide our design work, which went through several iterations. Rather than a linear process, the questions are the product of much back-and-forth discussions including those with Counterpoints Arts, the lead organisation of the Who are We? programme.

Out of these conversations we developed six reflexive questions about the relation between the design of our installation and the politics of how we know who we are. The first two address the relation between visualisations and participation:

How might we explore visualisations as not simple reflections but actively participating in generating political imaginaries of Europe and Europeans?

Visualisations participate in how we know who we are: that is, visualisations are not simply reflections of migration data but participate in generating particular political images of Europe and Europeans. For example, the Eurostat platform represents movement in snapshots of population numbers contained by and then exchanged between the borders of states.

How do visualisations imagine people as passive or active participants in the making and interpretation of how we know who we are?

Visualisations configure participation in how we know who we are. For example, the Eurostat platform engages a passive viewer who is presented with the visualisations and interpretations of Eurostat, and if able, can download them to generate their own.

The next two questions were provoked by the programme and identified visualisations as a possible response to conceiving of a different Europe.

How might visualisations participate in imagining not the movements of 'others'—migrants, refugees or asylum seekers—but imagining 'us' or 'Europeans' as already 'moving peoples'?

The programme asked us to think about an increasingly divided Europe closing its borders against real and imagined 'others' especially in fear of refugees caught up in the politics of migration. Rather than asking who are the 'others', the programme asked the reverse question: 'who are we?' which, for us, provoked yet another question: 'how do we know who we are?' How might visualisations participate in imagining another 'we' as made up of the dynamic movement and exchanges of people? Of Europe as a space of various movements, mixes, and flows of people within and without its borders?

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?

The programme asked us to consider what we are forgetting. This provoked us to think about Europe as always and already a dynamic space of movements that transcend state borders as Europeans exercise their right of free movement. As people move in different directions across Europe they recompose the spaces of Europe. How might visualisations trouble static concepts of Europe as a collection of nations and instead capture the patterns of this movement without resorting to borders as the organising frame? How might visualisations thereby imagine a version of Europe as made up of differential flows and mixes of people?

Two final questions responded to another provocation of the programme that called upon us to creatively experiment with technologies to glimpse another Europe, another 'We':

How might visualisations engage people and make explicit that data is a collective accomplishment and imagine another 'we', another Europe?

Data is not given or a simple reflection of who we are but is a political accomplishment because it involves numerous authorities and decisions about normative questions such as what is relevant and what matters. Government population data is one example and is typically organised, configured and controlled by national statistical offices. Both the making of this data and its visualisations engage Europeans as respondents rather than active participants. Yet, data and visualisations are political as they are consequential in making up how we know who we are. How then might visualisations engage people and make explicit that data is a collective accomplishment and in turn part of the understanding of how we know who we are and imagine another 'We',

another Europe? How then might individual data contributions be conceived as donations to this collective good?

How might the relation between data and visualisations be demonstrated and the ways they perform how we know who we are?

Data and visualisations are related: the former drive the latter and they need to be conceived together. As data changes through additions and interventions so too do visualisations. How might we show this relation through different visualisations of data that change in response to the data donations and participation of people?

As we have noted, these questions guided and also came out of our collaborative exchanges. *Part 3 addresses how we engaged with these questions through a series of experiments and prototypes for visualising Europe differently.*

eurostat

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Immigration by age group, sex and country of birth
Last update: 31-08-2017 [migr_imm3ctb]

Table Customization show

TIME		GEO		Age class Total
Age definition Age reached during the year		Country/region of birth Total		Unit of measure Number
Sex Total				

GEO ▼	2008	2009	2010	2011	2012	2013	2014
Belgium	:	:	135,281 (b)	147,377 (b)	129,477	120,078	123,158
Bulgaria	:	:	:	:	14,103 (bp)	18,570 (p)	26,615 (p)
Czech Republic	108,267	75,620	48,317	27,114 (b)	34,337	30,124 (b)	29,897
Denmark	57,357	51,800	52,236	52,833	54,409	60,312	68,388
Germany (until 1990 former t	682,146	346,216 (b)	404,055	489,422	592,175	692,713	884,893
Estonia	3,671	3,884	2,810	3,709	2,639	4,109	3,904
Ireland	82,592	50,604	52,339	53,224	54,439	59,294 (p)	67,401 (p)
Greece	66,529 (b)	58,613	60,462	60,089 (b)	58,200	57,946	59,013
Spain	599,075 (b)	392,962	360,705	371,331	304,053	280,772	305,454
France	296,608	296,970	307,111 (b)	319,816	327,431	332,640	339,902
Croatia	16,883 (b)	13,213	8,846	8,534	8,959	10,378	10,638
Italy	534,712	442,940	458,856	385,793	350,772	307,454	277,631
Cyprus	:	22,581 (b)	20,206	23,037	17,476	13,149	9,154
Latvia	4,678	3,731	4,011	10,234	13,303	8,299	10,365
Lithuania	9,297	6,487	5,213	15,685	19,843	22,011	24,294
Luxembourg	17,758	15,751	16,962	20,268	20,478	21,098	22,332
Hungary	37,652 (b)	27,894	25,519 (b)	28,018	33,702	38,968	54,581
Malta	6,043	6,161	4,275	5,465	7,111	8,428	8,946
Netherlands	143,516	122,917 (b)	126,776	130,118	124,566	129,428	145,323
Austria	73,772	69,295	70,978	82,230	91,557	101,866	116,262
Poland	:	189,166 (b)	155,131	157,059	217,546	220,311	222,275 (b)
Portugal	29,718	32,307	27,575	19,667	14,606	17,554	19,516
Romania	138,929 (b)	135,844	149,885	147,685	167,266	153,646	136,035
Slovenia	30,693	30,296	15,416	14,083	15,022	13,871	13,846
Slovakia	17,820	15,643	13,770	4,829 (b)	5,419 (p)	5,149 (p)	5,357 (b)
Finland	29,114	26,699	25,636	29,481	31,278	31,941	31,507
Sweden	101,171	102,280	98,801	96,467	103,059	115,845	126,966
United Kingdom	590,242	566,514	590,950	566,044	498,040	526,046	631,991
Iceland	10,288	3,921 (b)	3,948	4,073	4,960	6,406	5,368
Liechtenstein	578 (b)	584	591	650	671	696	615
Norway	58,123	55,953	69,214	70,337	69,908	68,313	66,903
Switzerland	:	:	:	148,799 (b)	149,051	160,157	156,282

Fig 8: Migration on Data (Source: http://bit.ly/2vTV2KS)

We developed different visualisation prototypes based on migration data from 2008–14 compiled by Eurostat, the statistical agency of the European Commission. Since 2008, member states have been required to collect and submit this data to Eurostat according to their different national practices but following common definitions and concepts established by EU regulation. We accessed the data via Eurostat's online database (http://bit.ly/2vTV2KS) and decided to focus on

annual movements into each EU country by country of birth. To do so required considerable data extraction and manipulation whereby Dawid had to calculate the year-to-year net change in migration from different combinations of countries of birth to countries of current residence.

The challenge of data extraction also extended to problems interpreting the tables based on the explanatory notes and metadata provided on the online database. For example, as noted by Eurostat, there are differences amongst states in the inclusion/exclusion of asylum seekers and refugees in the population data reported.

For us, both the challenges of data extraction and the complexity and variety of data practices pointed to the difficulties of generating different interpretations even for us who are relatively well trained in statistics, data analysis and interpretation. Recognising these limitations and following from our questions, we focused on developing visual alternatives that could imagine Europe that involve participation and collectivising the production of data.

In one iteration, we considered designing a heatmap that could show intensities of movements (light to darker blue) between EU countries in each year. This first attempt to imagine Eurostat data differently, though resulting still a tabular-like digital data presentation, started to show what could be achieved with alternative visualisations:
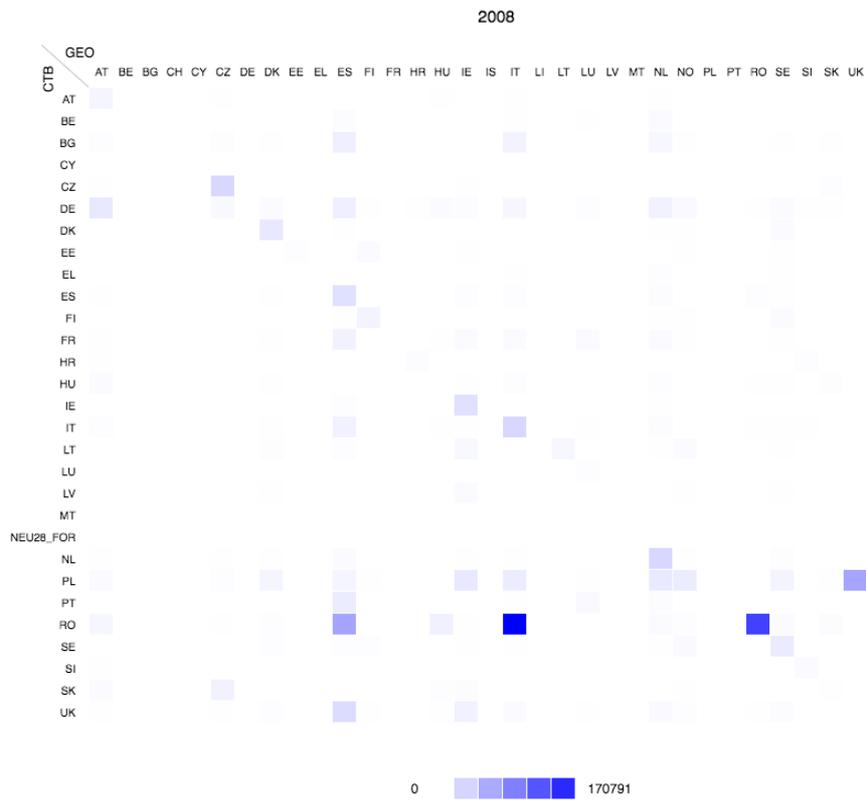
Fig 9: Heatmap — Migration in 2008

We then explored how to do the same across all years (2008–14) and again used cell color intensity to represent intensities of movement:
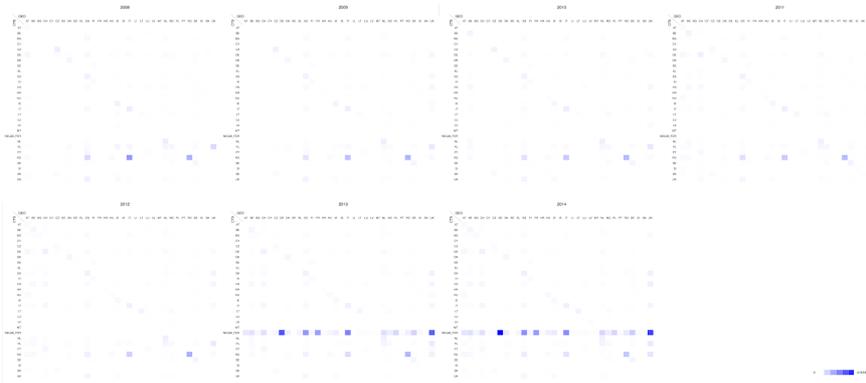

Fig 10: Comparative Heatmaps, 2008–14

While producing interesting patterns both visualisations are not easy to explain or interpret. Another issue for us was that they represent Europe as a static two dimensional rectangular surface that does not capture the movement and flow of people that constitutes Europe.

We then tried to imagine the heatmap alongside a recognisable and topographical map of Europe via a dynamic visualisation:

Fig 11: EU Topography and Heatmaps

In this iteration, different coloured dots represent individual bodies moving to a location and in this way translates numbers from totals into intensities. This graphical representation of individual bodies visually sums up movement in the thickness and volumes of lines moving to the same location.

However, the heatmap remained an interpretive challenge and following it together with a topographical map confusing and difficult. Another issue for us was that the topographical map still organises movement in relation to state borders rather than dynamics between relative locations of Europe.

But, we agreed that a visualisation based on topographical maps would be more recognizable and meaningful. We thus considered how we might retain the traces of topography and state borders (recognising their relevance in organising movement and making data) while at the same time abstracting from them to represent the right to free movement and how it 'shapes' what we know as Europe. A second consideration was related to our unease about how visualising movement as a series of lines flowing from an origin to a destination refers to another familiar form deployed especially in relation to the 'refugee crisis.'

We were concerned that such visualisations potentially stoke contemporary versions of Enoch Powell's 'rivers of blood' speech, where movement, especially of refugee 'others' is conceived as a threat. However, we thought that taking up this form could be an opportunity to resignify it: to imagine another 'we' as made up of the dynamic

movement and exchanges of people which has a similar form as that of our 'others'; and to see Europe as already and always a space of movements, mixes, and flows of people. In both ways we sought to critique visualisations of flow by resignifying them in relation to who we think we are as Europeans.

We thus decided to delete the names of countries and their borders, do away with the heatmap (which was not adding a useful interpretive layer), and generate a visualisation that would show Europe as a space made up of the movement of people. In the following iteration, we see Europe as a multicoloured collection of spaces composed by the in-movement of people from multiple birth places (colours):
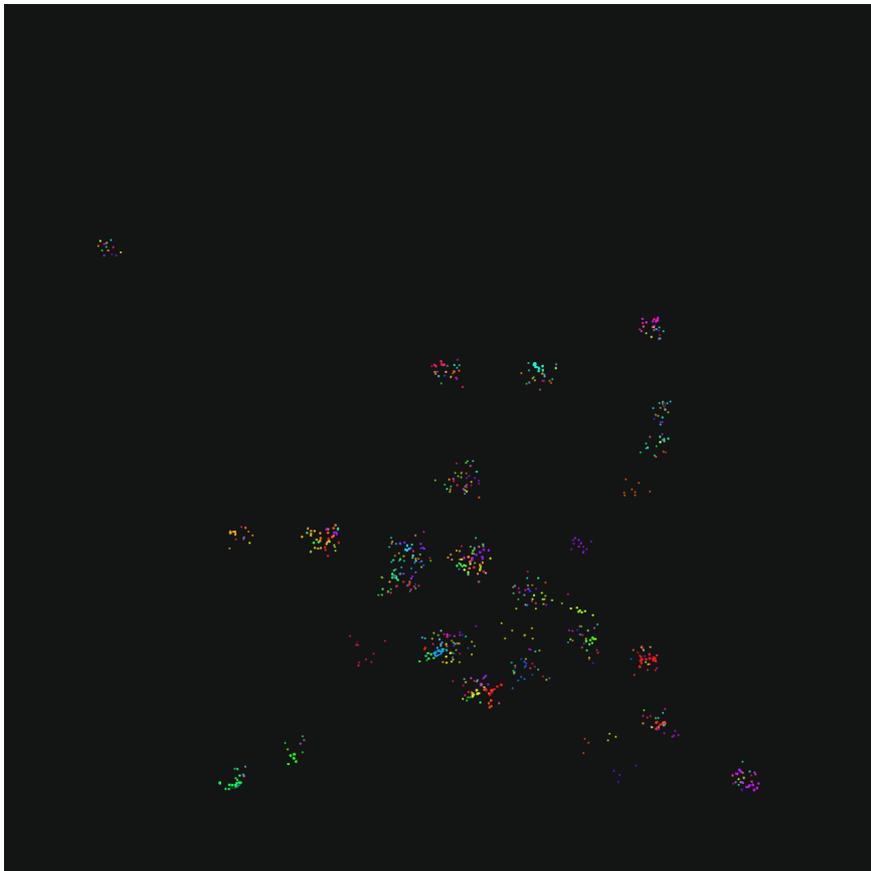
Fig 12: Multicoloured Europe

When sequenced over time, this visualisation could represent how the flow and movement of people dynamically 'recompose' Europe as changing multicoloured spaces. This lead us to think about the Eurostat data as 'traces' of movement that have historically formed Europe. We thus started to work on prototypes that combined movement with different colours and sized shapes to represent how Europe is recomposed:
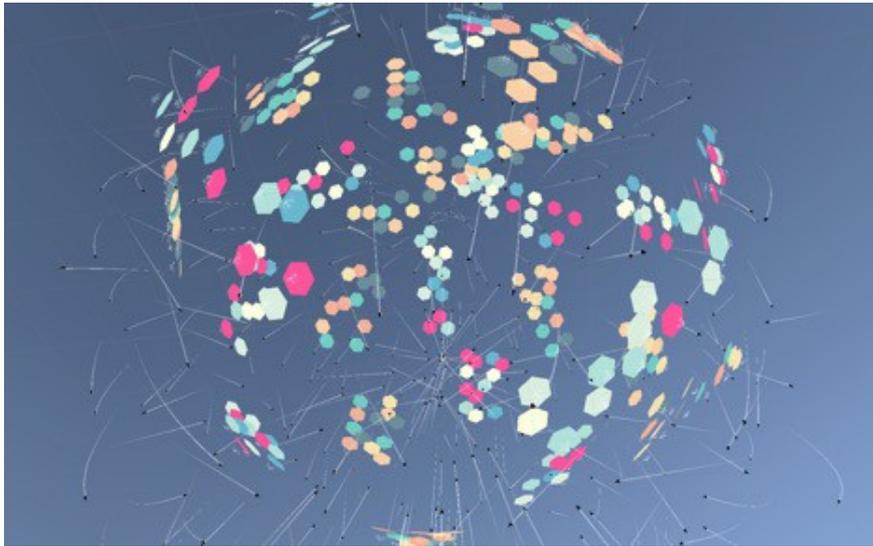
Fig 13: Multicoloured Europe and its movements

In this iteration, shapes, colours and sizes signal a change in the relative composition of the spaces of Europe. It combines movement (arrows) with the composition of Europe visualised as changes in colours and intensities.
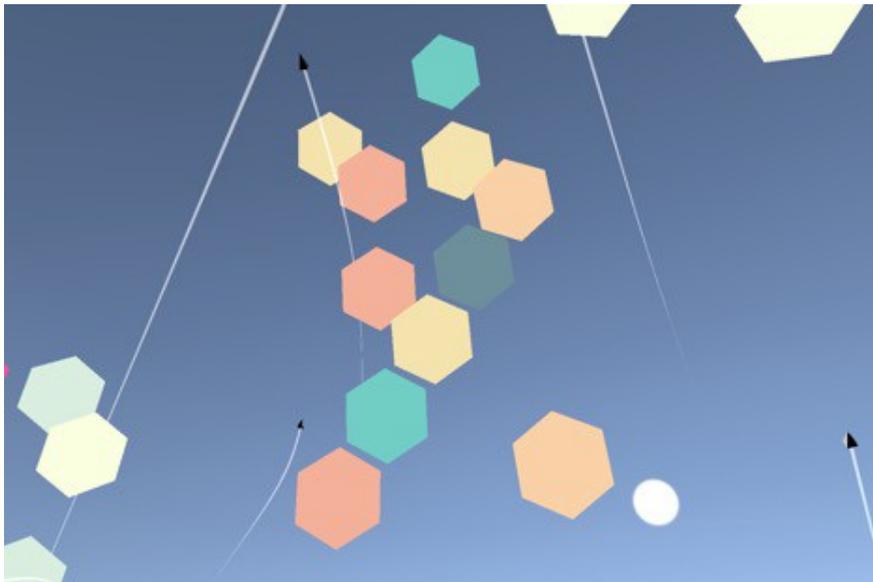

Fig 14: Multicoloured Europe and its movements

However, we problematised the way this visualisation translated one form of abstraction into another: from numbers into differently coloured and sized shapes. How might we then populate or personify these shapes? In response to this question we started to think about data traces as 'faceless' objects and asked who are their subjects? That lead us to think about how we might personify numbers and shapes through two forms of participation.

Traces and Faces

First, after some experiments, we decided to configure the colours of the shapes by developing a palette derived from selfies posted on Instagram as one way to collectivise the designation of the colours of Europe. David downloaded selfies posted from each country to develop a colour palette for each country:
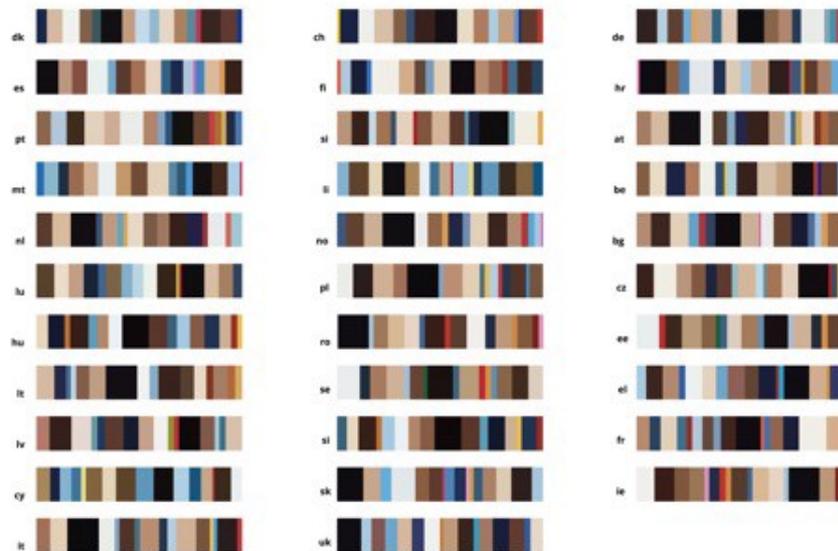

Fig 15: Country Palettes Developed from Instagram Selfies

Second, we then sought to consider how we might directly engage participation through an installation that is interactive. Arguably, people have indirectly participated in the making of Eurostat data through various methods of data generation such as censuses and population registers. However, we wanted to experiment with a way for them to directly interact and be part of recomposing of Europe. Continuing with our concern about abstract shapes, we explored ways of personifying the shapes in relation to the faces that make them up. We approached this carefully recognising that faces are also technologies of power but, like our problematisation of lines representing flows of movement, we considered how we might also resignify their meaning. We thus chose not to use 'real' faces for reasons of privacy but also, as our visualisation method will suggest, that movement can be captured through an imaginative reconceiving of faces. Taken together, thinking about lines and faces opened up the understanding that movement leaves its traces on who we are and what makes us up. How might we then register this through a creative articulation of the faces of people who make up movement? We decided to think of faces as consisting of lines much like those of the borders that moving bodies cross. So, while conceiving of Europe as a

space performed without borders, we sought to acknowledge that borders also leave their traces on lives that could be signified on faces.

Dawid thus wrote an algorithm that would match the lines on a person's face with sections of borders of their countries of birth and current residence:
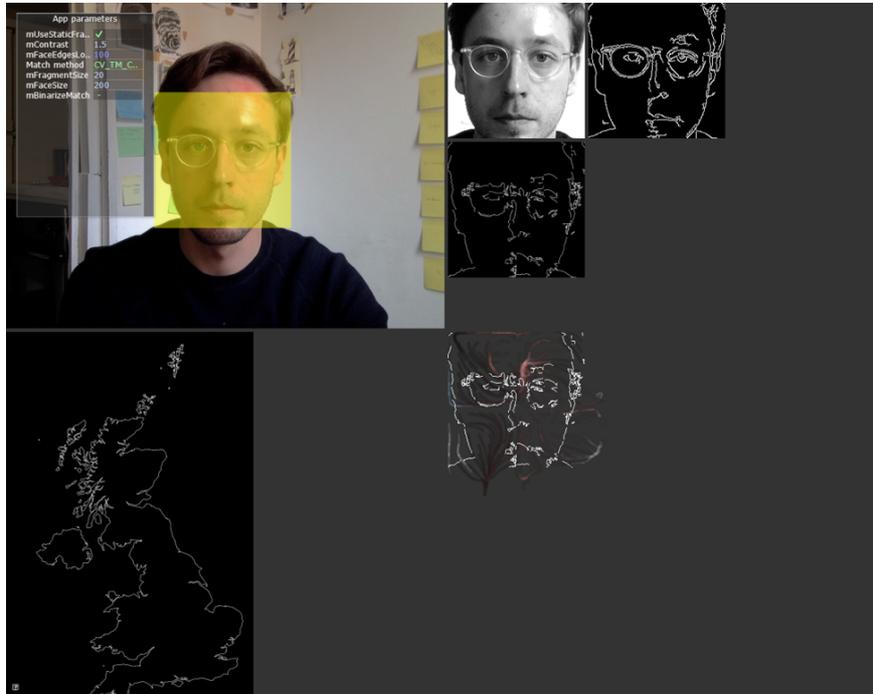

Fig 16: Faces and Border Traces

He then coloured the outlines of a face based on the colour palettes of both countries (born and reside) developed from the Instagram selfies:

Fig 17: Faces, Border Traces, and Country Colour Palettes

The idea behind this concept was to populate the coloured shapes of the prototype in Figures 13 and 14 with the data faces of visitors to the installation along with their trajectories from a place of birth to residence. The intent was to invite visitors to be part of personifying the visualisation as well as donate data about themselves as part of a collective effort to recompose Europe. That is, the installation would begin with the 'faceless' and abstract Eurostat data on movements between peoples' countries of birth and current residence to a version composed by visitors to the installation.

In **Part 4** we illustrate how we brought together the issues, questions and experiments discussed in the first three parts of this essay in a final installation presented at the Tate Exchange.
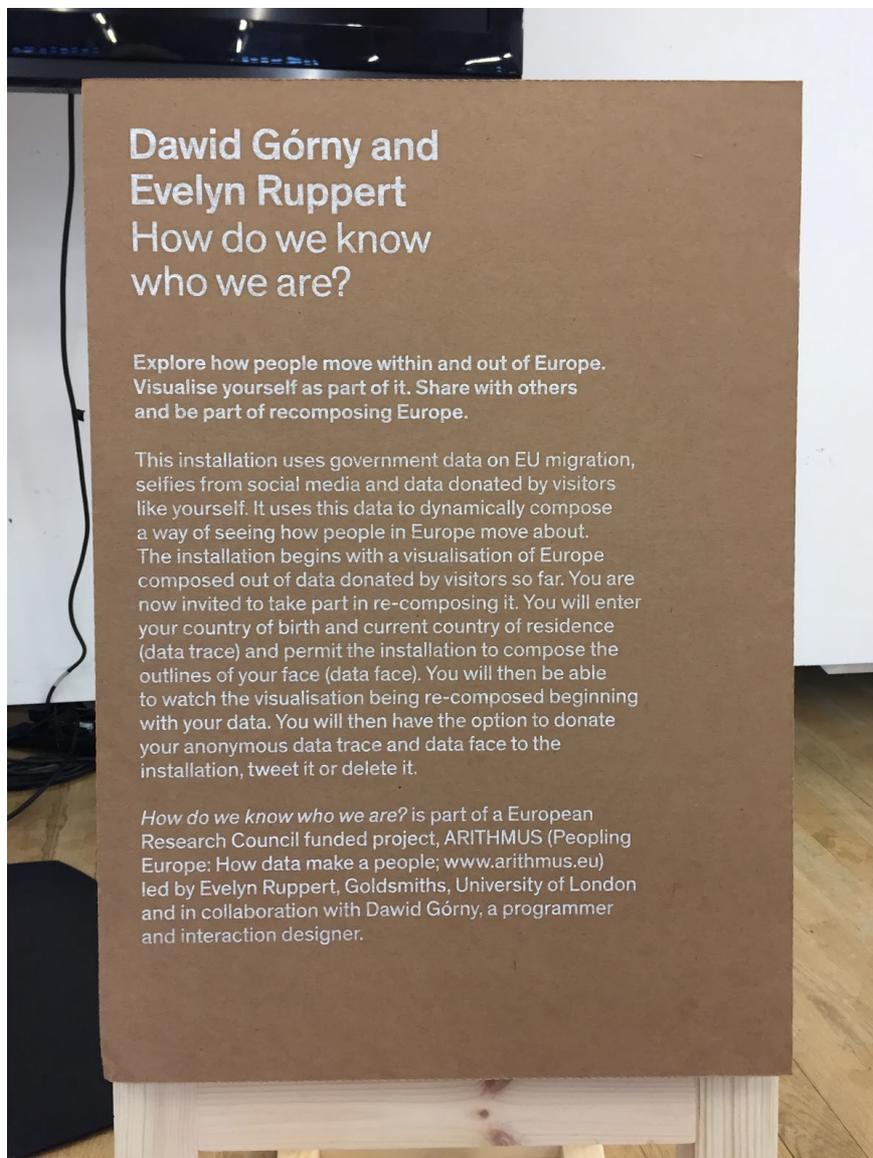
Fig 18: Description of the Installation

The final version of the installation that we arrived at involved the following setup. In brief, when visitors approached the installation they encountered a dynamic visualisation made up of the Eurostat data and data donated by visitors. The visualisation consisted of a series of clusters (countries/places) of different combinations of coloured shapes with lines of movement flowing into each from various other clusters (as in Figure 19). The visualisation sequenced these flows from 2008–14. This live and abstract visualisation of Europe served as a provocation for interaction through a series of steps that enabled visitors to zoom in on the makeup of the coloured shapes. They were invited to interactively explore their relations to data by experiencing and then contributing to different ways of imagining and visualizing who are Europeans. Clear instructions and understandings of how data was to be used were provided including their consent to the installation recording their anonymised data. Using an interactive iPad they could enter their country of birth and current country of residence (data trace). They then could permit the algorithm to compose the outlines of their face (data face) to replace one of the abstract shapes in their current country of residence.
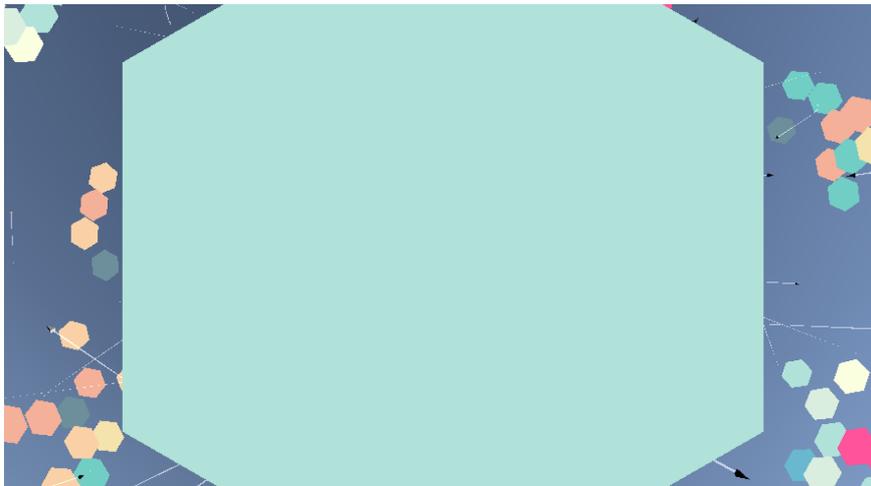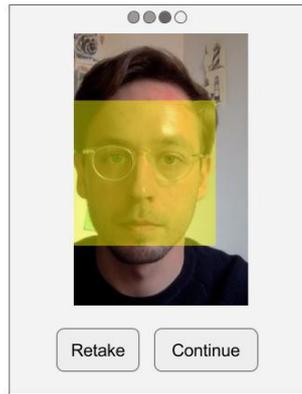

Fig 21: Zooming in on a Coloured Shape

Face capture   Instant data face visualization

Figure 22: Capturing a Data Face

Fig 23: Visualising a Data Face

Visitors could then watch the visualisation being re-composed beginning with their data face replacing a shape in their country of residence. They then had the option to donate their anonymous data trace and data face to the installation, tweet it or delete it. Some 350 visitors donated their data and many shared their data face via a Twitter hashtag: #recomposeEurope:

Final thoughts

It is challenging to do data and visualisation differently and as not simple reflections but which drive political imaginaries and ways of knowing and thinking about who we are. On the one hand, ours is a relatively simple experiment with data collection, analysis, representation and participation. On the other hand, we constantly had to negotiate the trade-offs between generating a visualisation that reimagines how we know and see Europe with one that can be easily interacted with by diverse visitors.

Inviting people to reimagine Europe is difficult as dominant forms of representation have come to limit imaginations and in turn interpretation. Yet we explicitly refrained from providing the rationales and explanations we have summarised here; instead we treated viewers as capable of drawing together their own ideas. While we received numerous positive responses both from comments entered on the iPad and in interviews, most visitors either did not provide feedback and many were perplexed.

Facilitating ease of interaction meant limiting the installation to two data points, of where a person was born and currently resides. We thought going beyond this would be overly complicated. Some participants critiqued this aspect of the installation as this data does not capture their full biography of movement. While the installation reproduced a governing logic that is interested in volumes of abstracted bodies rather than individual life histories, at the same time it opened up that logic to critique. Migration data typically denies the continuities and discontinuities of individual biographies and their changing patterns of movement over time.

There are other critiques possible of both the government data we worked with and the version of data and visualisation that we generated through the installation. Our modest objective to experiment with visualising migration data and imagining who we are as Europeans differently certainly turned into a complicated exploration of the politics of movement, data, visualisation and European identity. But it is only through iterations of such experiments that we can possibly re-imagine 'how do we know who we are?'

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Dawid Górny is a programmer and interaction designer working with computer graphics and data and is co-author of *Cinder Creative Coding Cookbook*. He was a part of Interaction Design team at Fabrica, a communications research centre, in Italy, and graduated in 2015. Dawid was one of the initiators of the art+bits festival, in Katowice, Poland, an encounter between art and technology. He is currently participating in Shared Cities, a cultural data research project as part of Medialab Katowice.

Evelyn and Dawid have also published a summary and short version of this essay in openDemocracy.

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