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The migration map trap. On the invasion arrows in the cartography of migration

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ABSTRACT
How is undocumented migration typically mapped in contemporary cartography? To answer this question, we conduct an iconological dissection of what could be seen as the epitome of the cartography on undocumented migration, the map made by Frontex – the EU’s border agency. We find that, rather than a scientific depiction of a migratory phenomenon, its cartography peddles a crude distortion of undocumented migration that smoothly splices into the xenophobic tradition of propaganda cartography – and stands in full confrontation with contemporary geographical scholarship. We conclude with an urgent appeal for more scientifically robust, critical and decidedly more creative cartographies of migration.

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The world’s cartographic straightjacket

Over the last decades, the ‘territorial trap’ (Agnew 1994) – an excoriation of the theoretical assumption of ‘the state’ as the fundamental unit of analysis in international relations – has fuelled some of the most fruitful research in social studies – perhaps most notably in the fields of critical geopolitics (Ó Tuathail 1996, vi, 9), mobility studies (e.g. Lorimer 2005; Sheller and Urry 2006; Cresswell 2011) and border studies (e.g. van Houtum and van Naerssen 2002; Newman 2010). However, we argue that, although the concept of the territorial trap entails an implicit allusion to maps (Agnew 1999), the self-reinforcing way in which this trap influences political cartography and derives from it – by informing foreign policy and shaping international politics – remains underexposed and undertheorized (van Houtum 2012; Walters 2010).

This is all the more remarkable given that maps are perhaps the most alluring artefacts of geography and the most persuasive descriptions of world politics (Kwan 2004). They are not merely a reflection of power but power itself: visual statements and narratives about the political topics they picture or, in other words, visual discourses. Their production is ‘controlled, selected, organised, and redistributed’ by procedures of exclusion that establish what is reasonable, true and acceptable to say – or depict – and what is not (Foucault 1981, 52–53). In cartography, these procedures of exclusion have adopted the form of a repertoire of signs which serve to simplify, categorize and narrate political phenomena to the effect of luring the reader with a tempting promise of immediate access to expert knowledge. The map’s godlike overview of seemingly inscrutable global dramas make war and conflict, migration, terrorism and other perplexing political issues appear intelligible to non-specialists (Henrikson 1999, 95–96). Although this expertise at a glance is a mirage, it is hard to overstate its usefulness to educators, politicians, advertisers, journalists, social media users and anyone tempted to communicate overwhelmingly complex politics in a neat depiction. Such beguiling intelligibility is enhanced by maps’ illusory lack of authorship and deceptive iconographic simplicity – which pass for objectivity and common sense. Maps’ snapshot-
from-nowhere character endows them with the ability to be regarded as trustworthy synopses of global geopolitics, which makes them a daunting propaganda tool to shape the phenomena that they depict (Harley 1989; Monmonier 1991).

In this article we critically analyse the maps that we use to represent the people moving across the world’s borders without the official visa documents (‘visas’ for short) or, as they are perhaps more widely known, ‘undocumented migrants’ (van Houtum and Pijpers 2007, 292). To exemplify how a specific cartographic iconography persistently promotes the territorial trap, thus translating ethnocentric world-views onto a political map, we zoom in on a highly influential map which typifies the cartographic representation that Frontex – the EU’s border agency – makes of undocumented migration to the EU. We use this single map as an epitomical illustration of our general argument about the cartography of undocumented migration.

In order to examine this map, we rely on an iconological method (Warburg 1932; Panofsky 1955; Gombrich 1972; Müller 2011), i.e. the assumption that the map’s visual composition – signs such as arrows, colours, borders, legend and inscriptions, projection, orientation, etc. – and subject matter – the map’s topic, which in this case is undocumented migration to the EU – can be interpreted both as a discourse in itself as well as a broader cultural manifestation (Kitchin, Perkins, and Dodge 2009). We distinguish three fundamental flaws on the Frontex map: the grid, the arrows and the framing effect of encirclement. We discuss how these distortions reflect the general perception of undocumented migration across the EU – its myths, if you will – and how they influence the political debate on the EU’s borders and identity. In the last part of the paper we discuss the decisive influence of this sort of cartography and reflect on alternative maps of migration and their potential.

The migration map and its discontents

The map below (Figure 1) shows the dominant cartographic depiction of undocumented migration used by the European Border and Coast Guard Agency – better known as Frontex – in what they suggestively

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**Figure 1. The Frontex map of 2017.**

Source: Frontex: https://tinyurl.com/yy3qelf9
call their ‘quarterly risk analysis’, i.e., an overview of the alleged ‘threats’ that the EU faces along its external borders. Curiously, even though the map is updated every three months, its visual composition remains roughly the same, see, for example, Figure 2, which maps the height of the refugee-protection crisis.

In isolation, this migration map might look insignificant: an aleatory image confined to one among numerous technical analyses by a murky border-control agency (Cetti 2014). However, seen as part of the assemblage of narratives, practices and images that render its visualization meaningful – i.e., its iconological dimension – we argue that this cartography puts together a peculiarly telling discursive mosaic. Rather than mere decorative illustrations, political maps of this sort are of unparalleled import: they stand as cultural testimonies that allow us to peek into the naked worldview of their makers like few other documents do (Kristof 1960, 45; Harley 1988a, 1988b, 1989; Wood 1992; Agnew 1998, 15–34; Wintle 1999, 2009; Pickles 2004, 25–72; Kitchin and Dodge 2007; Monmonier 2018; Brotton 2013; Branch 2014; Moore and Perdue 2014; Bueno-Lacy and van Houtum 2015).

The striking power wielded by this map – hereafter ‘the Frontex map’ – becomes vividly manifest once one realizes that it is by no means a stand-alone exception but rather the canonical variation of a much larger and persistently recurrent discourse (Foucault 1981, 56–58). This map has become the ‘normal’ and ultimately hegemonic cartographic representation of its subject matter: the geopolitics of undocumented migration to the EU. Variations of this map – which largely preserve the characteristic elements of its visual arrangement – or the political geography it narrates – have found their way into European societies through education (Wigen 2005), academia (van Reekum and Schinkel 2016; De Haas 2008), NGO’s (Canadian Red Cross 2015) and media. Concerning the latter, regardless of their ideological bent, all types of mass-communication channels – from the most reliable journalistic platforms to the most disreputable tabloids – have reproduced a similar cartographic proposition to ‘explain’ the misleadingly labelled ‘refugee crisis’ in Europe, thus turning the cartographic layout chosen by Frontex into the predominant template of most maps on

![Figure 2. The Frontex map of 2015.](https://tinyurl.com/y6o38jq3)
undocumented migration across the EU (e.g., Welt 2011; Daily Mail 2013; Steininger 2013; Pabst 2013; Adams, 2014; Adams 2015; Cieschinger 2015; Constantini 2015; Heck and Leijendekker 2015; Lyman 2015; Maxwell 2015; Neefs 2015; Schmidt 2015; Reimann 2015; Typothes 2015; Alameda and Gutiérrez Garrido 2016; Booth 2016; Hasselbach 2016; Khakhouri 2016; The Economist 2016; Beauf champ 2017; Gutiérrez and Jara 2017; Hauswedell 2017; AEDH 2018; Kingsley 2018). Yet, we argue, this is a template with severe flaws. To this we will turn now.

1. The grid

The first inadequacy of this kind of mapping refers to the uncritical use and normalization of the underlying grid of nation states, which the migration map under discussion here regrettably shares with the overwhelming majority of our political maps – from school primers to Google Maps (Farman 2010, 877–878) – even though this grid’s geographical foundations have been sustaining mounting scholarly critique (e.g., Harley 2001). In fact, some of the most exceptional geographical research in recent times has been inspired by an opposition to the nationally essentialist epistemologies that make the grid look natural. Today, the understanding of borders as social constructs has encouraged theorization on how space is produced (e.g., Lefebvre 1974, 1992; Massey 1995, 2005, 2012, 2013), historized (e.g., Agnew 1998, 35–50; Klinke 2012), imagined (Said 1978; Gregory 1995), and how the resulting geo-chronological imaginations exert a colossal geopolitical influence on some of the most dramatic turns in history (Ó Tuathail 1996).

As a result, borders are today dominantly theorized as ceaselessly mutating socio-political dynamics liable to multiple interpretations rather than as immovable grid lines (e.g., Paasi 1998; van Houtum and van Naerssen 2002; Wastl-Walter 2011); hence the shift from talking about borders – as a noun – to talking about b/ordering – as a continuous verb (van Houtum and van Naerssen 2002; van Houtum 2005; Newman 2006). This discursive shift in border studies has coincided with a revolution in migration and mobility studies that has become known as the ‘mobility turn’ (Lorimer 2005; Sheller and Urry 2006, 2011; Cresswell 2011). A core critique of this turn counters the prevailing cartographic assumption that people are largely static entities and instead theorizes how all manifestations of human mobility – far from natural phenomena caused by ungovernable forces – are shaped instead by “constellations of power” that exert a great deal of influence over “the creation of identities and the microgeographies of everyday life” (Cresswell 2011, 551).

These discursive trends have also percolated theoretical cartography since the 1970s (Pickles 2004, 25–72; Monmonier 2007; Kitchin 2014). The poststructuralist reflections on imaginative geographies (e.g., Said 1978; Harvey 1990; Gregory 1994, 1995, 2004; Castree 2001; Kitchin and Kneal 2001; Springer 2011), as well as the schools of critical and radical cartography (e.g., Harley and Woodward 1987; Harley 1988a, 1989; Wood 1992; Wintle 1999, 2009; Branch 2014), critical geopolitics (e.g., Ó Tuathail 1994; Dalby and Ó Tuathail 1998) and critical border studies (e.g., Agnew 1999; van Houtum 2012; Sidaway 2015) have exposed the many ways in which maps simultaneously reveal and exert surreptitious yet forceful manifestations of power – most conspicuously in the rapacious conduction of statecraft (Pickles 1992; Unger 2002; Gregory 2011a, 2011b; Campos-Delgado 2018). However, an unfortunate offshoot of this bulging body of cartographic critique – in spite of its doubtless merits – has been the conflation of political cartography with propaganda cartography to such an extent that it has engendered a sort of ‘phantom’ – an aversion to mapmaking – among academic geographers (Wheeler 1998). Alas, the most knowledgeable experts in mapmaking have been discouraged to create better maps and this has held back the production of alternative, non-essentialist cartographies (Perkins 2003, 341; Moore and Perdue 2014, 896) – which could help explain why grid-thinking still reigns unchallenged in political cartography.

The Frontex Map emphasizes the flawed logic of the national grid by visualising Europe devoid of human beings. We see boxes of static nation states without (the movements of) their populations while a mass of gigantic red lines symbolizing undocumented migrants cross their borders, seemingly disrupting the grid’s natural order. This conscious deletion of human beings is what we have earlier described as a form of ‘cartographic cleansing’ (van Houtum 2012). In this world without humans, their overwhelming diversity is dissolved into homogeneous nation states whose borders are supposed to confine the
movement of the populations they contain (Hall 1992). This visual layout reinforces the fictitious notion of the state as either the legitimate representative of its people or as the effective ruler of its territory (Risse 2011, 1–35) – an exaggeration of most states’ legitimacy and power as well as a visual chicanery to conceal inter- and intra-state blends and divisions (De Genova 2013; LiveLeak 2012; Agnew 1994; Wimmer and Glick Schiller 2002; Harley 1989; Ó Tuathail 1994; Walby 2003; Parker and Vaughan-Williams 2009, 586; Brotton 2013, 289–326; Branch 2014).

Moreover, by relying on this ‘classic grid’, the Frontex map de facto reproduces and validates a national biopolitics that, by design, creates regimes of political control over foreign bodies – following the anxious rationale that their infiltration across the state’s boundaries may destabilize its imagined community (Foucault 1978–79; Anderson 1983). By normalizing nativity’s ‘myth of origins’ (Elden 2013, 21–52), the national grid’s visual logic has an implicit predisposition to breed anxiety for the non-native. The map’s grid seems to suggest that, if people are ‘natural’ inhabitants of the country where they were born, then it follows that migrants – a politically constructed category – are unnatural intruders in countries other than their own. This logic is a propitious breeding ground for all sorts of xenophobic prejudices (Pupavac 2008; Esses, Medianu, and Lawson 2013; Gorodzeisky and Semyonov 2015; De Genova 2017). Tellingly, the only people shown on the Frontex map are represented by menacing arrows, i.e., those who throw into disarray the ‘natural b/order’ of the national grid – making them by default an exceptional abnormality (van Houtum and van Naerssen 2002; van Houtum 2010). This fear of foreigners is further aggravated by the Frontex map’s sole emphasis on undocumented migrants under the header ‘Quarterly detections of illegal border-crossing, 2015–2017’, which conflates undocumented migration with a criminal offense to the ‘organic’ unity of the state – i.e., the natural ‘purity’ of a country’s own history and people (Kristof 1960, 21–8; Foucault 1978–79; Bashford 2004).

What is inconveniently ignored by the Frontex map is the paradox that, more often than not, asylum seekers can legally apply for refugee status only by ‘irregularly’ entering the EU - whose protection they seek (Black 2003; Nyers 2010; van Houtum and Lucassen 2016; Manby 2017). The illegalization of undocumented migrants is a conscious political construct that begins with the denial of legal travelling documents – i.e., a visa – to potential asylum seekers in their home countries, thus leaving them no alternative other than entering the EU without the unobtainable visa. Such discrimination is officially codified in the EU’s positive and negative Schengen list: a ranking of nationalities that assesses the desirability of the migrants it allows into its borders. Individuals holding passports identifying them as what the EU considers to be the ‘wrong place of birth’ – a total of 135 countries out of 195 – face near-zero chances of being granted a visa for the EU (van Houtum 2010; Schuster 2011; Jansen 2016). This constitutes a clear discrimination on the basis of the accident of birth and thus a contravention of Articles 1, 2 and 21 of the Charter of Fundamental Rights of the EU as well as of Article 1 of the Universal Declaration of Human Rights, which states that ‘all human beings are born free and equal in dignity and rights’ (UN 1948). In other words, the EU is trying to convince us that it needs to violate its core humanistic principles in order to defend them (Dubernet 2018; Cusumano 2019). In contrast to what we could more fairly call undocumentalised migrants, those born in countries on the positive Schengen list – predominantly rich countries – can travel without much effort to the EU in the comfort of a plane and without a visa. In contrast, the near deprivation of legal migration channels for those born in countries on the Schengen blacklist has created a smuggling industry worth over 1 billion euros a year – roughly as big as the border industry trying to stop it (The Migrants’ Files 2015). Thus, refugees’ smugglers are a consequence of the discriminatory EU border regime and not the other way around (van Liempt and Sersli 2012; Ehrkamp 2016, 4).

Yet, instead of recognizing that this industry is a product of its own deficient border policy (Neal 2009) – and hence has created an auto-immune reaction in the EU’s border regime – the EU keeps peddling an official rhetoric that tries to invent its own reality by pretending that undocumented migrants are a problem caused by human smugglers and traffickers. Frontex’s and the EU’s rhetoric of cracking down on ‘trafficking’ and ‘smuggling’ as well as their advocacy of ‘voluntary repatriation’ is an attempt to shift the blame over to far less decisive geopolitical players than themselves. The implicit dependance between the EU and the smugglers has led to a shocking fatality rate among undocumented migrants travelling to the
EU – over 30 thousand since 1993 (The Migrants’ Files 2015) –, making the EU’s external border the deadliest on the planet (van Houtum 2010; van Houtum and Bueno-Lacy 2017). Hence, the toughest border is not barbed wire or concrete walls but the oxymoron of paper border of the EU’s visa regime, which has turned the EU into a de facto ‘paper fortress’ (van Houtum and Lucassen 2016). What is at stake here is thus not the absence of a border that protects the EU from the arrival of unwanted “illegals” – as extreme nationalists and populists often suggest – but precisely the opposite. We are witnessing the effective closure of EU’s paper border, i.e., the absence of legal channels that is creating this miscalled ‘illegal’ migration – while those who help them, including the NGOs that rescue them from drowning, are criminalised – only aggravates undocumented migration, trafficking, smuggling, suffering and death.

It is worrying to realize that the reasons of migration, the causes of its irregularity, and the own repelling policies are entirely missing from Frontex’s cartographic representation of undocumented migration. Instead, through its simplistic, dehumanised and static grid, the Frontex’s map offers a visual normalisation and essentialisation of a self-made EUropean b/order in which those who cross it are pictured as unforeseen and abnormal lawbreakers and a danger for the ‘natural’ order of the EU.

2. The arrows

The binary antagonism between desired normal fixity and unwanted abnormal mobility that the Frontex map promotes is brought to a climax by what is arguably its most striking feature: its converging crimson arrows. To be sure, in the semiotics of maps, the arrow has long been the favoured and unchallenged symbol to represent movement because of its undisputed navigational practicality: it depicts information about the initiation, route and destination of movement; a path that is followed in order to get from A to B. However, an arrow has also another, more clandestine and less scrutinized existence: it can turn into one of the most forceful symbolical devices when its use is extrapolated from the purely navigational to the political; when instead of a directional device it takes the role of a frightening metaphor (Boria 2008, 281). It takes but a rapid glance at the Frontex map to realize that the colour, direction and shape of its arrows constitute an allegory alerting the viewer about multitudes of “unwanted bodies” invading the EU and bringing with them unspecified threats - a connotation that spills into the prevalent xenophobic discourse that portrays asylum seekers as a “security, economic and hygiene threat” for European populations (El Refaie 2001, 2003; Abid, Manan, and Abdul Rahman 2017).

The significance of this Frontex map for European policymaking and the European discourse on immigration can be better grasped by comparing it to maps that rely on a similar iconography to depict ‘incoming risks’. From a cartographic perspective, what makes the arrows on the Frontex map particularly eye-catching is that such alarm-raising arrows have traditionally appeared in propagandistic and military maps. A straightforward example is a Dutch map of the invasion of the Netherlands and Belgium by Nazi Germany (see Figure 3).

This invasion map – randomly chosen from a vast collection of invasion maps – elucidates how propaganda and military cartography rely on a plain and eye-catching visual composition to represent either the strength of a country’s military actions or its vulnerability at the hands of a powerful threat. This visual design does not pursue scientific accuracy but rather the schematic efficiency of an oversimplified diagram to deliver a simple message: an existential confrontation between friends and foes.

One would expect the Frontex map – given its avowed civilian and humanist mission – to rely on more nuanced, evidence-based and sophisticated iconographic techniques to represent the complexity of undocumented mobilities as accurately as possible in order to serve as the cartographic basis for the kind of humanitarian policymaking it is supposed to foster in matters related to the EU’s external borders. It is disquieting to realize that this is far from being the case: the Frontex map shows the same penchant for the friend-vs-foe visual composition typical to invasion cartography. Unlike scientific maps, the Frontex map does not aim at representing a body of scholarship; rather, its design serves as justification of its aggressive purpose: to exaggerate the threat posed by undocumented migrants in order to cultivate political support for even tougher borders.
In other words, we can recognize in the Frontex map a propagandistic use of arrows – analogous to that of military invasion cartography – to symbolize an imagined, gigantic, imminent and violent conquest of Europe by global masses of undocumented migrants. Furthermore, the continuity of the arrows on the Frontex map wrongly assumes that all migrant journeys have the bull’s eye fixed on the EU from start to finish and that all border crossings along the apocryphal migrant routes invented by the
arrows can be lumped together under the same category of ‘illegal’ or ‘irregular’ migration. The map ignores the fact that a good number of countries in the arrows’ way – and thus in the migrants’ way – are actually legally crossed; that certain countries in the Economic Community of West African States (ECOWAS) exercise very little border control on migration; that not all migration routes are geared towards the EU and that, those which are, not always end up there. In other words, the cartographic iconography is deeply ideological: it amounts to the imposition of a Eurocentric vision of undocumented migration and its concomitant spatial imagination.

What is more, undocumented migration is often anything but a straight line. The information that a straight, unidirectional arrow may convey about, say, a tourist’s place of origin, traveling route, destination as well as motivations, emotions, intentions and overall ease of mobility cannot be extrapolated to the distressing experience of undocumented migration. Straight lines capture neither the distress of sleeping rough in makeshift tents and unknown cities as part of unavoidable stops that might last months or years; nor the perpetual anguish at the prospect of being found and either imprisoned or deported; nor the anxiety of life-threatening journeys across deserts and seas; nor the languishment in overcrowded detention centres where the endurance of rape, slavery and overall corporeal abuse is an all-too real possibility (Amnesty International 2016). The smooth continuity and straightness of the arrows on the Frontex Map promote geographical and temporal distortions that misrepresent the harrowing experience of undocumented migrants, making it look as if they would make the choice to go from a point of departure to a point of destination with the same nonchalance as any middle-class tourist. This, as we know from all disciplines researching this phenomenon of human mobility, is a downright contradiction of the prolonged and serpentine zigzag journeys that undocumented migrants undertake (van Houtum 2012; Schapendonk 2012; Schapendonk and Steel 2014). The unidirectionality, homogeneity and ‘illegality’ of undocumented migration represented by these converging arrows encircling Europe is thus flawed on a very basic scientific level.

Admittedly, yet arguably not less worryingly, the use of invasion cartography to represent (undocumented) migration has a more widespread political impact that extends far beyond whatever audience Frontex’s risk analyses might reach, for it is also widely reproduced by official school atlases. An unambiguous example is the Dutch ‘Big Bos Atlas’ (De Grote Bosatlas), which is the unchallenged reference for geography courses all throughout the Dutch educational system (see Figure 4).

Part of an obligatory study material in Dutch primary and high schools, this map of the refugee crisis reproduces the political cartography of the Frontex map together with its propagandistic invasion arrows and the effect of civilisational encirclement that they produce. Although the convergence of such visual language may appear inconsequential, textbooks’ specialists – like the Georg Eckert Institute for International Textbook Research – well know that these educational artefacts are most people’s first and only approach to their national identities and thus to prejudices about other nationalities of the world: they are the basis of most people’s geopolitical imaginations (Gregory 1994, 1995; The Economist 2012). The Frontex map, widely used in policy and media circles, splices into this tradition of representing undocumented migration through the iconography of invasion, which pushes the latter’s use to new extremes. A telling illustration of the latter is the Manichaean colour coding of its arrows: blue for one’s own side and red for ‘enemy’ forces. Colour is one of cartographers’ most powerful tools to convey a message and it would be naïve to assume that Frontex cartographers are unaware of this. Colour has been shown to ‘activate different motivations and consequently enhance performances on different types of cognitive tasks’ – i.e., tasks that require a great deal of conscious mental activity such as decision- and policy-making. The blue/red opposition is a common trope used in cartography to signify antagonism: red is a colour associated across cultures with abnormality, danger, warning, sexual promiscuity, anger and fear (e.g., Elliot et al. 2007; Feltman and Elliot 2011; Hupka et al. 1997, 166; Gerend and Sias 2009) while blue is a colour ‘often associated with openness, peace, and tranquillity (e.g., ocean and sky’ (Mehta and Zhu 2009, 1226). Contrastingly, the baby blue with which the EU represents itself communicates an innocence, peacefulness and vulnerability that masks its own powerful policies – such as its military interventions in Afghanistan and Libya as well as its exacerbation of conflicts through enormous exports of arms and military technology.
to repressive regimes in Africa, the Middle East and Asia; its agricultural protectionism and discriminatory visa policy, all of which significantly contribute to push people out of their devastated or impoverished countries to seek refuge in the EU (Walters 2010).

Although the arrows’ unidirectionality, straightness and colour already make the baseless suggestion of an invasion, their hugeness is possibly even more troubling. We know that undocumented migrants coming to the EU represent only a minority of global migrants. According to the UN Population Fund (UNFPA), only 3.3% of the world’s population lives outside their country of birth, which means that more than 96% of humanity is not a migrant. Of these roughly 250 million migrants, there are approximately 20 million from non-EU countries who reside in the EU (about 3.7% of the EU’s total population). Of these immigrants living in the EU, between 335,000 (Sabbati and Poptcheva 2015, 3) and 3.8 million are ‘irregular migrants’ (IOM 2015, 12) – a disputed figure given the stealthy sort of migration that it tries to measure. Be that as it may, it means that undocumented migrants make up only between 0.1 and 0.7% of the EU’s total population. Hardly the numbers of an invasion.

Moreover, there are around 70.8 million forcibly displaced people worldwide – many of which are undocumented migrants (UNHCR 2019). This means that even if we assume the highest estimate of undocumented migrants for the EU, it would still be hosting only around 5.5% of the world’s total. The
implication is that, unlike the Frontex map so boldly suggests, almost 95% of all undocumented travellers in the world do not go to the EU at all but to countries close to their own instead. Although this utilitarian logic should not be a reason for the EU to default on its foundational principles, these numbers paint a remarkably different picture than the one offered by the Frontex map: not only does the EU receive a small fraction of the total global population of undocumented migrants – and thus asylum seekers – but their numbers do not amount to a considerable demographic pressure for the EU by any measurement.

Yet, even though the arrows on the Frontex map stand for thousands of undocumented migrants – which bulged to over a million in 2015 – their size is as large as Spain, France, Germany or Britain. In other words, the number of migrants is depicted as such an exaggeration that the arrows make them look as if they could take over the EU. Compare, for instance, the numbers of undocumented migrants represented by the Frontex map with those of yearly tourists visiting Europe (van Houtum and Boedeltje 2009; Coldwell 2017; Burgen 2018). France alone receives over 80 million tourists a year (UNWTO 2017, 6). What kind of gargantuan arrowheads would that number warrant using the scale employed by the Frontex map? Should the daily traffic of consumers, tourists, politicians, soldiers, civil servants, traders, investors, business people, rich migrants (aka expats) and other migrants travelling to the EU – or within it – be also visualised, the Frontex map would render a less selective and deceitful representation of our mobile and relational world. Such relatively simple visual comparisons could prevent undocumented migration from being decontextualized as a unique phenomenon and, instead, they could paint a fuller picture of a world where far more people other than refugees are also on the move.

3. The frame

The third and final fallacious element that we wish to draw attention to is the frame of the map. The choice to highlight the EU on a Frontex map is of course not illogical. Yet, as it is often the case with models – such as maps – what is left out is as important as what is represented. The Frontex map fails to deliver any kind of global – let alone historical – comparative perspective that may allow us to see that undocumented migrants coming to the EU represent a small fraction of overall global migration. On the contrary, the intimidating arrows demand the onlooker to believe that the EU – one of the richest regions in the world commanding an increasingly militarized border system – is at the mercy of destitute armies pouring from all around the world. From the very bottom of Africa and the farthest corners of Asia, the Frontex map shows a multitude of colossal arrows travelling unimpeded across the Afro-Asian landmasses to reach the EU. Their sheer length and profusion suggest that vast populations of entire continents are coordinately moving into the EU in one single motion that converges at three bottlenecks along its external borders. Although most arrows seem to have specific countries as their point of origin, it is not very clear how rigorous this might be. The source of some arrows is lost beyond the margins of the map, leaving the onlooker to assume that some of these migratory routes might stem from ‘somewhere in the far east’, thus implying that what matters about this map is not the specificity of its details but its broader message: the migratory movements that its arrows represent might as well come from everywhere around the world – especially the world of less affluent Muslims and Africans – with the EU as their sole destination. This framing technique is known as encirclement: a rhetorical and visual trope intended to exaggerate the threat posed by unwanted foreigners and thus justify more aggressive policies towards them which is, unsurprisingly, an all-time favourite of the xenophobic movements in both Europe and the US (Jaret 1999).

Although all cartography is political (Harley 1988a), this kind of propaganda cartography – especially in opposition to scientific cartography – arose during the first half of the 20th century and ripened in the US as well as in Fascist Italy and Nazi Germany between the 1920’s and 1940’s (Herb 1997; Schulten 1998; Boria 2008). This tradition peaked in Germany nurtured by a public discourse that persistently constructed the geopolitical imagination of a German state surrounded by imminent military threats and a German people that, scattered beyond its borders and oppressed by unfriendly European states, longed for its protection (Mazower 1997). This fear of encirclement (Einkreisung) was purposefully used as a propaganda strategy to justify the pursuit of a space of security for the Europe-wide German diaspora (i.e., Lebensraum) through the mobilisation of the German state into total war (Sywottek 1976, 140–141, 194–201).
The subject matter of encirclement is characterized by a cartographic layout that, we argue, at its most basic follows three b/ordering and othering techniques (van Houtum and van Naerssen 2002): 1) it \textit{borders} an ‘endangered’ political project and places it at the centre, thus suggesting an urgent and inescapable focus as well as a need to protect its vulnerability (Henrikson 1999, 102–103); 2) it \textit{orders} its own territory by demarcating its borders and by inscribing details on it that differentiate it from others with the aim of nurturing self-identification and co-opting allegiance to a political project, thereby silencing internal differences and suggesting a spurious territorial homogeneity and cohesiveness; 3) it \textit{’others’} its periphery as a nameless and seemingly endless zone consisting of threatening symbolic devices – such as arrows, troops, planes, or tanks – that have no precise source and thus seem to come from everywhere to encroach upon their target.

To give another example, below, the ‘White Supremacist Map’ (see Figure 5) – authored by a leading right-wing terrorist in the US – shows the American white-supremacist narrative about an invasion by ‘primitive peoples’ (Miles, n.d.; Ferber and Kimmel 2000; van Houtum and Bueno-Lacy 2017, 92–93). What

![Diagram of the 'White Supremacist Map']

**Figure 5.** 'White Supremacist Map'.
Source: Miles (n.d.) The Birth of a Nation: Declaration of the Existence of a Racial Nation within Confines of Hostile Political State. Cohoctah, MI: Mountain Church

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{White_Supremacist_Map.png}
\caption{The ‘White Supremacist Map’.}
\end{figure}
we see is an imminent encirclement of the US by an invasion of immigrants who, symbolized by elephantine arrows stemming from all around the world, are made to look inexorably poised to change its virtuous racial configuration for the worse.

It is disturbing to see that the Frontex map is an heir to this tradition of threatening encirclement. It should be considered an extremist cartographic composition, for a visual argument that presents a set of invading arrows surrounding a defenceless EU paints a hopeless situation that calls upon viewers to support any measure – regardless of how extreme – to shield them from this existential threat. Unsurprisingly, a visual arrangement that promotes the narrative of ‘civilisational survival’ within the context of undocumented migration squarely reproduces one of the core tropes of the xenophobic politics of today: ‘white genocide’ or ‘race suicide’ (Perry 2004). These white-supremacist conspiracy theories have coalesced into ‘the grand replacement theory’ (Camus 2012), which postulates that white populations in Europe and the US are being purposefully replaced by non-white immigrants with antagonistic cultures and high birth rates who have been allowed in by political elites whose openness to the world amounts to treachery. Such superstition has reached the mainstream with the publication of books that rail against the cultural degradation of Europe, the US or the West as a consequence of immigration (e.g., Buchanan 2002, 2011; Sarrazin 2010). Eurosceptic neo-nationalists – the ‘alt-right’ – are using the unfortunate contemporary resonance that this message has among EU populations to bring back their brand of ethno-exclusionary politics (van Houtum and Bueno-Lacy 2017). Brexit is the most patent success of such Euroscepticism: it was promoted by a campaign that relied on a variation of the same invasion cartography and the same iconography evoking white supremacist tropes (Kent 2016) (see Figure 6).

A last and pristine example of the hegemony enjoyed by the fallacious cartographic layout of undocumented migration epitomized by the Frontex map is a propaganda video made by Geert Wilders – a Dutch EUrosceptic and Islamophobic politician. In this video, he lambastes Muslim and African immigration while promoting the classical racist tropes of overpopulation by dark, culturally threatening and impoverished immigrants, a discourse that he crystallizes in a map of Europe that reproduces the same cartographic design of the Frontex map (see Figure 7).

We would say, to say the least, that the harmony between official EUropean cartography and anti-EU cartography should raise a thousand red flags among EU policymakers and geographers responsible for visualizations of undocumented migration like the one seen on the Frontex Map.

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**Figure 6.** ‘Brexit Map’.
Source: (Kent 2016)
Alternative maps

Until now, alternative maps that deviate from the Frontex iconography are still scarce, and their use is largely confined to small circles where ‘radical’ cartography has broken some ground (see Casas et al. 2017). Nevertheless, there is a slowly growing collection of brave and inspiring attempts to come up with different cartographic visualisations of undocumented migration. It would be beyond the scope of this article to mention and analyse each and all of them. However, we will briefly discuss three trends that we see as very promising – namely, counter-mapping, deep mapping and mobile mapping.

First, there is a growing body of what is called counter-mapping. Counter-maps are checks on power whose aim is to contest the oppressive message, application and implications of hegemonic cartographic depictions. Counter-maps point to the crucial importance of cultivating an iconological expertise among political cartographers. Countering the economic, social and political misstatements of traditional cartography requires a new cartographic canon as well as a moral compass to guide it. Interesting cases in point are atlases made by largely non-academic collectives such as the Atlas of Radical Cartography (Mogel and Bhagat 2008), the Manual of Collective Mapping by the Buenos-Aires-based “Iconoclasistas” (2016), This is not an Atlas by the “Kollektiv Orangotango” (2018) and “The Decolonial Atlas” (2014). What these works share is that they include collectively made maps that sacrifice the spatial precision and pretended objectivity of traditional cartography for the creative distortion, strident authorship and critical statements of a visual design intended to expose either the false assumptions or dishonest motivations pervasive in hegemonic maps. Their counter-maps aim at emancipating the map by radically humanising it, which implies consciously bringing to light the geographical information that matters to the people whose existence and interests traditional cartography usually invisibilizes. Such maps depict, for example, asymmetric power struggles (e.g., silenced indigenous land claims or the incidence of sexual harassment in a city) and unspoken routes (e.g., the secret detention centres and unlawful kidnapping routes used by the US as part of its endless ‘war on terrorism’; walking routes designed to avoid surveillance cameras when moving through a city; safe immigration passages for undocumented immigrants, etc.).
Despite their powerful narratives and new cartographic designs, these maps have so far gained relatively little academic – let alone political – attention.

Similarly, in the field of undocumented migration there is also some inspiring work, like the superb counter-map made by Heller and Pezzani (2017), who made an impressive video of a boat with 72 migrants on board that, at the height of the war on Libya in 2011, was left to drift for 14 days even though it was within NATO’s maritime surveillance area. Another collective worth mentioning is Migreurop, a collection of migration scholars who periodically publish an *Atlas of migration in Europe* whose most recent version contains a brief critique of the Frontex map – much in line with our analysis.

Furthermore, the French cartographer Philippe Rekacewicz (a collaborator of Migreurop) has published compelling critical and radical maps on migration – many of them in *Le Monde diplomatique* (see Figures 8 and 9). Unlike the Frontex map, his maps depict the power relations of undocumented migration to the EU in a manner that better reflects the state-of-the-art scientific research on it. The first map offers a global synopsis of how the EU’s visa regime limits most of the rest of the world’s population from legally travelling to the EU. The second map displays the deadly aftermath of this paper border regime along the EU’s external borders and within Schengen. Rather than a vulnerable EU being ‘overrun’ by undocumented migrants, these ‘counter Frontex maps’ show that the EU is part of a system of visas, detention centres and biopolitical border controls that discriminates, dehumanises, illegalises and willingly endangers undocumented migrants (see also van Houtum 2010; Cobarrubias 2019).

Another interesting example of counter-cartography is the map by Arnold Platon, an independent mapmaker (see Figure 10). Platon’s map is intended as a geopolitical statement on undocumented migration.
migration. He shows the often-unrepresented connection between the wars supported by (eastern) EU Member States and the provenance of refugees which those same states now refuse to accept. It shows how those states that today refuse to accept refugees coming to the EU from Iraq, Syria and Libya are the same that supported the geopolitical actions that led to these countries’ instability, collapse and the flight of their population. His map is thus a critique of the hypocrisy behind those EU Member States’ opposition to the creation of a comprehensive asylum system across the EU (Karolewski and Benedikter 2018), especially since they supported the very war that has led scores of undocumented migrants to seek asylum in the EU. Showing such unacknowledged geopolitical relations is one of the most forceful ways in which counter-maps speak truth to power. It is an example of how a cartographer can make a dent in the dominant visualization of a pressing geopolitical issue by crafting a mordant political message with the use of radical cartographic techniques.

A second promising trend that we identify is deep-mapping, which is concerned with the humanisation of space to give a rich, situational, consciously relational and subjective account of place-related emotions in order to counter the ‘cartographic cleansing’ of human beings shown on hegemonic maps (van Houtum 2012) – such as the dehumanising cartography used to represent mobility and migration (Dodge 2016, 2–3; Mekdjian 2015; Campos-Delgado 2018).

A powerful example of this kind of mapping is the deep-map made by Mustafa, a Syrian refugee, who retraced his journey from Syria to France (see Figure 11). Unlike traditional cartography, Mustafa’s cartographic composition provides a telling personal account of the physical and mental hardship that an undocumented migrant must endure during a typical journey. Depicted by the Frontex map, Mustafa’s individual story – as well as the plight of the millions of undocumented migrants to which his story could be extrapolated – would become a faceless pixel in a big threatening arrow moving

![Figure 9. Counter Frontex map: ‘The forbidden world’, by Rekacewicz (2014).](image-url)
towards the EU. Against this narrative, Mustafa has pictured a world in which it is him – not the EU – who faces uncertainty and fear, hardship and hostility.

The third trend we distinguish is mobile mapping, which stresses the dynamic, relational and convoluted paths of human interaction by geo-positioning data harvested through mobile means, such as mobile phones, social media, cameras, satellites, open source mappings and film (Mekdjian 2015; Caquard 2011, 2013, 2014). Rather than a priori departing from the nation-state template, mobile maps tend to focus on representing unfixed mobilities, networks and connections. A good illustration in the case of undocumented migration is the ‘Migration Trail Project’, a map that retraces the journeys of undocumented migrants to the EU with help of interactive visualisations and podcasts.

There is also a growing number of documentaries and movies that have taken migrants and their plights as their subject matter. The dynamism of these ‘motion pictures’ is increasingly blurring the distinction between two-dimensional cartographic ‘still lives’ and cinematic road-trip movies. A good example is Human Flow, by the Chinese artist Ai Weiwei, which ‘maps’ the profoundly personal human
impact and desperate search for safety, shelter and justice that plagues the experience of undocumented migrants. The mobile maps that undocumented migrants show in this film reveal that, rather than a straight and unbroken line, their movement is of a highly uncertain, contextual and trial-and-error nature haunted by jarring anxiety and waiting periods (see Cobarrubias 2019).

This short overview of encouraging cartographic strands can of course only be a rough description of the most promising alternative mappings of undocumented migration. But it shows that there are multiple opportunities for bold new visual designs beyond what within mainstream cartography is traditionally underrepresented or even misrepresented when it comes to visualising undocumented mobilities.
Conclusion

Political maps confront us with the fundamental paradox of cartography: although they are perhaps the most immediate evocation of geography, they are also some of its most anti-geographical artefacts, for they conceal at least as much as they reveal – and often much more (Wood 2003; Monmonier 2018). The implication is that every single political map should be acknowledged as a political statement.

The Frontex map of undocumented migration we have analysed in detail is a case in point: it presents itself as an objective truth on the basis of which border policies along the EU’s external borders can be formulated. Yet, its arrangement of iconographic choices creates an image of undocumented migration that bears little resemblance with this geopolitical phenomenon. Its science is wrong and its politics are perverse: the overall message of the Frontex map is a nativist diagnosis about the perils of ‘non-native’ immigration and a subtle yet violent recommendation to fix it. This is not a trivial matter. For, the relevance of this particular map is that, unfortunately, it does not represent a rarity but the norm, not only in cartography but in the larger discourse and ‘spectacle industry’ that undocumented migration has become (De Genova 2011; Jones 2016).

Whether the Frontex map shows purposeful ideology or subconscious prejudice is something we cannot unequivocally assert. Either way, the viewer is ultimately exposed to a visual composition in which a threatening invasion of migrants is taking over a defenceless EU. This reproduces a disreputable trope of evil against innocence: red versus blue. This is the classical dichotomy of ‘friend vs foe’ on which the worst kind of ethnocentric violence is usually constructed (Schmitt 1932). Although this is not a new discourse, it echoes a biopolitical discourse whose presence is troubling to recognize in the official cartography of the EU. Regardless of how unintentional the Frontex map’s iconography might be or how unaware onlookers might be about its discursive heritage, these accidents do not make the map’s potentially unintended message less striking nor its geopolitical implications less meaningful (Harley 2001). The Frontex map is namely part of the discursive mechanisms through which the EU is trying to justify the outsourcing of its refugee-protection responsibilities to unscrupulous authoritarian regimes in Turkey and North Africa (Bialasiewicz 2012; Zoeteweij and Turhan 2017), thus contributing to the creation of slave markets and the bulging graveyard at the bottom of the Mediterranean. The Frontex map is thus yet another attempt to normalize the spaces of exception multiplying across the EU and eroding its liberal-democratic principles (Agamben 2005; De Genova and Peutz 2010; van Houtum and Bueno-Lacy 2017). The EU and its Member States are trying to conceal their humanitarian irresponsibility and overall mismanagement of EUrope’s borders behind the travesty of a patronizing high ground: that it would better for undocumented migrants if they would not take the dangerous journey to begin with; and that human traffickers and smugglers are to be blame for undocumented migration. As if the flight undertaken by undocumented migrants was much of a choice or less of a right and as if the trafficking and smuggling of migrants was not an industry propelled by the very border regime that the EU has put in place. We have earlier referred to this intertwining of cartography and geopolitics as cartopolitics (van Houtum 2012, 2013; Bueno-Lacy and van Houtum 2015): a political discourse that relies on cartography to b/order geography and thus to b/order history, culture and people through the geographical imaginations that maps arouse. By manufacturing perceptions of all-encompassing geographical scale, cartographic artefacts implant in people’s heads a mediated reality – ideas of the world people acquire not through first-hand experience but through representations that other people have made of it.

Most migration maps seem to remain stuck in a mindset that sets the idealized native against the menacing non-native and which, for the most part, ‘shows a persistent disconnect between the mainstream academic-applied cartographic research and the contemporary concerns of most human geographers’ (see also: Dodge and Perkins 2008; Hennig 2015; Dodge 2016, 1). What the iconography of the invasion-like cartography of migration seems to shamelessly proclaim are discourses that we assume many policymakers, news anchors, intellectuals, academics, school teachers and other public commentators would find uncomfortable or impossible to admit in spoken
or written words – either because it would endanger their positions or because they are entirely unaware of them. Perhaps this ignorance is where maps derive their power from and what makes their study an indispensable yet underdeveloped endeavour. Not only might they alter our perception of the world but they might puppeteer us into reproducing the scenes of a theatre play in which powerful interests want to make us act a part without us even being aware of our ability to change the script.

We have shown how the current mapping of undocumented migration amounts to blatant cartographic malpractice, tendentious science and ruinous policymaking for the EU. In other words, this is the kind of ‘science’ society needs to be defended against (Feyerabend 1975). So, we would argue that it is time for us geographers and cartographers to emancipate the map of undocumented migration from its own territorial trap. There is a need for a post-representational political cartography that takes into account the map’s cognitive dimension: why do our political maps look like they do, what do they say about the politics of the phenomena they represent and how do they influence them? (Dodge 2016, 7). We make a plea for more radical mapmaking (Wood 2003; Crampton and Krygier 2006; van Houtum 2013), and for a more philosophically, morally and iconographically sophisticated conception of the cartography of (undocumented) migration.

Even though in the short run we might be unable to create a better border management regime for undocumented migrants due to stubborness and political constraints, at least the cartography of migration could avoid taking the side of unscrupulous politicians. To accomplish this we need to understand the cognitive and political effects of cartographic design choices (Robinson 1952; Caquard 2013, 2014). As Ladis Kristof already said in 1960, ‘Men have already learned to distrust words and figures, but they have not yet learned to distrust maps’ (1960, 45). For, the geography we visualise is more than a set of technical cartesian coordinates on a paper or a screen: it can be a cartopolitical trap with very real consequences.

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