



Migration Trail: Exploring the Interplay Between Data visualisation, Cartography and Fiction

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INTRODUCTION

This chapter outlines recent evolutions in data visualisation of migration and investigates the possibilities for its blending with cartography and fiction. The study orbits around Migration Trail, an online interactive platform that allows users to follow a real-time journey of two imaginary migrants to Europe through the use of maps, podcasts, fictional family conversations and interactive data visualisation. The project was created by Killing Architects, a Rotterdam-based independent architect studio run by Alison Killing. The studio experiments with communicating to the

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M. Sandberg et al. (eds.), *Research Methodologies and Ethical Challenges in Digital Migration Studies*, Approaches to Social Inequality and Difference, https://doi.org/10.1007/978-3-030-81226-3_4

general public about social issues that have a strong spatial component such as migration and climate change, exceeding the conventional architectural production of design and plans, to create exhibitions, writing, film and research. In Killing's words, her studio attempts to take distance from a traditional interpretation of her profession to harness "architects' skills of spatial analysis and representation" beyond the mere construction of buildings (Killing 2018, 32). The authors have opted for an in-depth case-study approach as the project is a highly original and novel effort to challenge the way in which migration data are processed, combined and communicated. Considering the interplay of geospatial data visualisation with other representational techniques, the research examines how it challenges the ubiquitous narrative of migrants as problematic and vulnerable "others". With the use of multimodal analysis, this chapter investigates the interaction of textual, audio, visual and spatial elements of communication in Migration Trail.

In stark contrast to the "invasion of red arrows" often observed in traditional EU migration cartography (Van Houtum and Bueno Lacy 2020, 201), this website renders an unusual set of data (i.e. wind strength, airplane routes, battery level of the migrants' mobile phones and GPS coordinates of previous migrants' shipwrecks) along with fictional family chats, and original atlases of human mobility. Migration Trail takes advantage of recent developments in digital communication technologies, specifically by benefiting from the proliferation of affordable web-based geographic information systems that allow independent content producers to manipulate and display great volumes of geographic data. Once again—as envisaged in the introduction of this book—digital technologies reshape the way producers tell migration stories: autonomous users can instantly query (big) data to design interactive cartographies and visualisations, a digital immediacy that is prompting a genuine boom in neo-cartographic practices. Migration Trail's geospatial display is considered in all its individual elements, with each visualisation choice studied both in its singularity and in interplay with other communicative dimensions.

The chapter begins with a concise excursus on relevant literature exploring recent studies on migrants' cartographies, data visualisations and fictional accounts; three different fields that are proficiently intersected by Migration Trail's composite production. Subsequent sections outline in detail how the website functions and summarise the results of

the analysis. All in all, the multimodal exploration highlights how Migration Trail attempts to clearly illustrate the humanity of migrants by vividly narrating a subjective account of human mobility. The remarkable use of hybrid visualisations also emphasises the structural—political, economic and social—dimensions of migration in an attempt to subvert hegemonic mapping practices by challenging the ever-present EU border securitisation perspective. However, the conclusive analysis of Migration Trail’s narrative strategies highlights certain problematics, tensions, as well as several limitations in the representation of migrants, which could possibly hamper the website’s effort to convey an original mobility story through the interplay of fiction, cartography and data.

MIGRATION DATA VISUALISATIONS, CARTOGRAPHIES AND FICTION

In the words of its creator, Migration Trail is a fictional online experience narrated through a “real-time animated mapped data visualization” (Killing 2018, 33). A significant portion of the project, indeed, consists of visual representations of spatial data, originally assembled to accompany the narration of two migrants in their journey to Europe. A cartographical view evolves over the course of 10 days from the first opening of the website and serves as the background for the interactive data visualisations and narration of the fictional border crossings. The project addresses a non-expert audience, as Killing presents the project as stemming from the recognition that migration is typically poorly understood among European news audiences. The creator criticizes the fragmented mainstream media news coverage that seldomly goes beyond reporting individual tragic events, restraining the general public’s ability to develop a systemic understanding of migration. This section explores recent literature on each of the three elements interacting in Migration Trail—cartographies, data visualisations and fictional accounts—setting the scene for the following detailed scrutiny of their interplay in the overall experience.

Our research embraces the call for a critical understanding of migrant representation in data visualisations (Crawford et al. 2014, 8; Ruppert et al. 2017, 2). In this light, all data artefacts should be considered as multimodal objects that are both “generated by – and generative of – data politics” (Allen 2020, 186). Specifically, data visualisations—maps, tables or charts—intervene in political debates, revealing or challenging established discourses, norms and hierarchies of values (Ruppert et al. 2017, 2).

Datasets might reproduce choices by visual designers and commissioning institutions, reflecting graphical constraints but also echoing political priorities and policy-making agendas.

Scholars investigate the effects of specific design decisions to communicate data on human mobility and examine how compositional choices—of written, visual and spatial elements—can convey both express and tacit political positions about migration (Allen 2020, 180–191; Rall et al. 2016, 171–197; Risam 2019, 566–580). Risam notes how migration data visualisations frequently corroborate problematic framings of migrants: dehumanising individuals and marginalising vulnerable communities with visual discursive choices (*ibid.*). In the same spirit, Rall reviews several data visualisation choices, advancing strategies to strengthen data communications for human rights advocacy and avoids the above-mentioned adverse effects of aseptic datasets on migration (Rall et al. 2016). Over the past three decades, a plethora of critical approaches have highlighted how mapping practices—like any other data visualisation—can reproduce cultural power relations: far from considering maps as mere objective reflections of reality, scholars have focused on arbitrary choices, frames and discourses that often subject cartography to the hegemonic power of political authorities (Crampton 2009, 91–100; Harley and Laxton 2002; Monmonier 2018). In this respect, researchers have noted how human mobility maps often reflect certain cartographical “distortions”, possibly affecting the public debates on borders and undocumented migration across the Union (Van Houtum and Bueno Lacy 2020, 201).

Inspired by such critical approaches, recent papers on migration cartography have attempted to capture original efforts that aimed to go beyond the hegemonic use of mapping: initiatives that reclaimed the potential of maps to contest the normative geographies of mobility that are inborn in the practice (Tazzioli 2019, 397–409). To illustrate this approach, Mekdjian and Amilhat Szary explore “counter-cartographies of exile” by studying a map that, beyond countries and cities, includes personal traces of the refugees’ experiences on the road to Europe (i.e. governmental and material restrictions, the challenges of clandestine truck rides, the risk of police encounters) (Mekdjian and Szary 2018, 258–263). Similarly, Lo Presti analyses EXODI, an example of interactive cartographic narration that includes the first-person experience of thousands of migrants from Sub-Saharan Africa (Lo Presti 2020, 911–929).

Van Houtum and Bueno Lacy suggest a useful typology of such alternative cartographies, distinguishing three types of developing practices:

counter-mapping, deep mapping and mobile-mapping (Van Houtum and Bueno Lacy 2020, 201). The examples in the first category (e.g. Topological Atlas)¹ aim at countering “the languages and images of power” to become means of resistance and emancipation (Nancy Lee Peluso 1995, 386). Similarly, deep mapping counters the polished, flat representations of hegemonic maps through the portrayal of subjective accounts (e.g. Migreurop’s Mustafa’s Journey) (Migreurop 2017). The third strand, mobile mapping uses mobile-data “phones, social media, cameras, satellites, open-source mapping and film” to render the highly subjective, complex and polymorphous nature of human mobility (Van Houtum and Bueno Lacy 2020, 16).

Migration cartography, as mentioned, has evolved beyond the mere geolocation of mobility tracks to encompass seizing maps’ virtually unlimited potential to decipher and tell stories (Caquard and Cartwright 2014, 101–106). In this regard, combining fiction with maps—and other types of data visualisations—represents a compelling development in the field of experimental, alternative representation practices. Original works in this terrain (i.e. 407 Camps, Schaal’s Cartography, or Crossing Maps)² remain largely unexplored in academic research to this day.

Giada Peterle’s conceptualisation of carto-fiction as a “self-reflexive, ethnofictional, creative carto-centred practice” represents a notable exception in the academic panorama (Peterle 2019, 1070–1093). The author presents a concise novel *Unfolding Berlin*: a production that uses words, maps and drawings to narrate the personal exploration of an unknown, unfamiliar city. The explicit aim of such a hybrid effort is to render an emotional, intimate cartography, producing a narrativising of mapping practices from a post-representational perspective (ibid., 1074).

Other than that, studies on fictional migration narratives have limited their explorations to traditional domains such as film, documentaries and literary fiction. Over the past two decades, migration fiction in both films and literature has developed at a fast pace and is now considered a self-standing genre (Mandelbaum and Ridet 2011). Academics have investigated the descriptive constructions of the genre, identifying recurrent frames and discourses in that field (Berghahn 2020, 399–410; Hiltunen 2019, 141–155; Ponzanesi 2016, 217–233; De Bruyn 2020, 25). Such studies delved into migration documentaries, films and books, producing significant reflections on concepts such as kinship, bordering, dehumanisation and othering. This has put on the map efforts to portray

migrants' subjective experiences, and intimate realities narrated in migration fiction. Other investigations on the same topics alternatively noted how in artistic discourses on refugees and migration, creators often reproduce stereotypical identities inherited from mainstream media (Drücke et al. 2021, 160–183).

All in all, research on data visualisation, cartography and fiction emphasises a certain level of tension between accounts that reproduce hegemonic discourses about migration and alternative efforts to produce cultural artefacts that counter such narratives. On the one hand, discourses that are widespread in traditional press—the ubiquitous portrayal of migration as a “crisis”, and of migrants as suffering or dangerous others (Berry et al. 2016; Chouliaraki et al. 2017, 35)—get picked up, validated and reinforced by certain uncritical digital media productions (Aarssen 2017, 1–14). On the other, researchers have directed their attention to grassroots digital practices, exploring efforts to counter such persistent narratives (Nikunen 2020, 411–423; Georgiou 2018, 45–57). In several online practices, researchers have found personalised accounts of migrants: individuals who can “voice” their experience and appear as campaigners, militants and political agents (Georgiou 2018, 58). Their suffering is, in such communicative efforts, profoundly de-massified, shedding light on stories of individual struggle and hope. Inspired by Georgiou and Nikunen’s explorations, this paper intends to shed light on Migration Trail by exploring how its unusual combination of visualisation practices provides migrants with “voices” and counters widespread stereotypical discourses on migration. Since 2015, a whole body of counter-cartographies of migration emerged on the media landscape. Among such efforts, this chapter focuses specifically on Migration Trail because of its highly intermedial character, intended as the combinations of several modalities of interaction with the audience. Such pronounced intermediality denotes Migration Trail as a highly hybrid media product that simultaneously intersects three different scholarly debates on forced migration. Primarily, Migration Trail’s narration through a textual message box recalls the scholarship of the digitally connected migrants. Secondly, the interactive mapping experience prompts us to reflect on the increasing possibility of proficiently using digital tools for migration storytellers. Finally, the choice of creating fictional characters that venture into a migrant journey intersects the debates on the truthful-objective migration accounts and creative representation of minorities in the media.

RESEARCH OBJECTIVES OF THE ANALYSIS

This study considers Migration Trail's interplay of data visualisation, cartography and fiction, examining to what extent such a hybrid product challenges the hegemonic portrayal of migration as a "crisis", and of migrants as suffering or dangerous others. Alison Killing created Migration Trail intending to mend for allegedly flawed media coverage of migration. Our analysis of the website descended from such consideration and began with the exploration of academic literature on mainstream media accounts of migrants (e.g. Chouliaraki et al. 2017). The portrayal of migrants as *others* to European audiences emerged as the ubiquitous critique scholars moved to mainstream media accounts, providing a relevant conceptual lens to empower the exploration of Migration Trail.

The concept of othering, central to the present exploration, is considered a dichotomous recognition of identities that is instrumental in the process of exclusion of specific individuals from European societies (Udah and Singh 2019, 843–859; Zaborowski and Georgiou 2019, 92–108). Representations that slip in depicting migrants as others, often reproduce them in fallacious, dichotomous symbolism: the speechless victim and the evildoing culprit (Chouliaraki et al. 2017). In common press accounts, in traditional data visualisations or fiction, migrants often appear as pure victims: passive subjects of political-economic conditions and vulnerable beings in need of protection. Yet, at other times, they emerge as a threat to European societies, or a menace to the cultural, organisational and social welfare of European countries.

This chapter particularly concerns deepening an original narration of ordinary experiences of mobility. To this end, we cast academic light on Migration Trail's attempts to describe migrants' connected lives, affective interactions and networks of care, and therefore respond to the autonomy of migration (AoM) call to overturn the scholarly fixation with governance and security. Conversely, such a scholarship invites engaged academics to replace governance and security by investigating opportunities to create a "common world of existence": highlighting migrants' agency to occupy social spaces (Papadopoulos and Tsianos 2013, 178).

This research, therefore, aims at understanding to what extent Migration Trail fulfils its commitment to produce a militant, original portrayal of the everyday sociability of mobile individuals. In particular, the study

deepens understanding of how the introduction of a fictional narrative—portrayed through an unusual set of data visualisations and maps—challenges the dominant othering of migrants. Empirically, Migration Trail’s content, both textual and visual, is explored in relation to the aforementioned discursive categories of vulnerable and dangerous others, assessing the author’s effort to counter those two frames emerging prominently in traditional data visualisation, cartography or fiction.

Initially, this research attempts to map Migration Trail’s functions, thoroughly exploring the website’s content while understanding the dynamic interplay of all multimedia elements that interact in the digital visualisation. The objective is to detail how the website operates, what techniques are employed and how verbal, visual, textual and sonic elements work together in the communicative effort of this highly hybrid web piece. Subsequently, the analysis focuses on how Migration Trails renders its unconventional narrative about migration. The effort lies in uncovering what messages and frames the creator embedded in the website, identifying how migration is discursively conceived and delivered, and verifying the extent to which such web work challenges the othering of migrants perpetrated by a significant part of the media.

The study starts out with a multi-method approach to the content, combining multimodal analysis (Pauwels 2012, 247–265), which is further validated by a semi-structured interview (Adams 2015, 492–505). With multimodal analysis, the authors investigated the website in all its components, focusing on the interactions and combinations of different modes of communication to achieve a communicative function (O’Halloran and Smith 2012). In other words, the analysis considers the interplay between the multiple modes (i.e. texts, maps, videos, sounds or music) engaged in creating the website. The choice of a multimodal framework of investigation implied an iterative process during which components and layers of the website were progressively analysed in more detail. This method resonates well with the highly interactive nature of experimental data visualisations on human mobility, i.e. productions in which the medium has a particular influence on the choice of specific modes of expression (Hiippala 2020, 277–291).

In stage two of the study, the authors shared the findings of the multimodal analysis with Alison Killing, the creator of Migration Trail. This inquiry followed the scheme of member checking: a well-established practice used to counter-check pre-analysed data to integrate and confirm the validity of such information (Cho and Trent 2006, 319–340). Through

an interview, the authors shared the inferences, beliefs and emotions gathered throughout the analysis, aiming to see how such results accurately render Killing's intentions when producing the website. This study attempts to generate what Geertz (1973) described as a "thick description" of Migration Trail. In this light, we foresee an interaction between the multimodal analysis and a semi-structured interview with the creator as a particularly suitable mixed method to analyse the data. However, the research is grounded in an interpretive research field, and there is no purpose in seeking an absolute correspondence with the realities investigated. Therefore, the multimodal analysis and the interview should be seen as decoupled with the aim of truthful validation; on the contrary, they are solely intended to integrate each other to the overall goal of providing a particularly detailed account of the website analysed.

DENOTATIVE INVESTIGATION OF MIGRATION TRAIL: AN OVERVIEW OF THE WEBSITE

This section offers a comprehensive descriptive account of Migration Trail and outlines in detail the three main sections of the website: the cartographical view, the fictional chat box and the spatial data visualisations.

The Main Cartographical View

From a denotative perspective, Migration Trail's main visualisation presents the user with a full-screen cartographical view, a visualisation that is popularised by digital delivery and mobility services such as Deliveroo and Uber. As noted by McKinnon, the advancements in the digital domain enable the proliferation of maps, which has led researchers to declare that we live in the age of mapping (McKinnon 2020). Web-based geographic services (such as Mapbox and Google Maps) have simplified the production of cartographies, and now creators can, within the limits of the technological affordances, appropriate and remodel online maps for their own purposes. Migration Trail's opening map is initially centred in Libya's capital, Tripoli, with a large zoom feature giving a broad view of the Sicilian Channel. This geographic segment was rendered ubiquitous in mainstream media's representation of the extended European maritime surveillance apparatus, and this focus is reminiscent of the monitors and radar of a European border patrol station. Such aerial displays—as noted by

Madörin (2020, 698–711)—often risk producing the effect of commodifying refugees and reducing their movement to statistical probabilities. The website’s data visualizations, maps, chatbox and sounds evolve over ten days from the moment the user first opens the page, inviting the audience to repeatedly access Migration Trail to obtain a protracted and continuous engagement with the narration. The connection between written and visuals elements is central to the overall 10-day experience in Migration Trail. As is often the case, visuals and written content coexist in a highly complementary context, jointly providing new meaning to the whole construction (Martinec 2005, 343).

The two human protagonists, identified on the map by pulsating red dots, move around the cartographical visualisation while their fictional conversations begin to pop up in the chat box. The main cross-modal correlation lies, therefore, between the visualised position on the maps and the textual content: the interplay between the two elements provides the full picture of the journey narrated. Meanwhile, background elements illustrate the context of action: wind visual signifiers, previous shipwrecks icons, stylised planes and ships moving on the maps play evocative symbolic roles in relation to the characters’ journeys. An additional cross-modal correlation lies between sound and visuals, as Migration Trail’s sonic signifiers feature prominently in the overall visualisation, fulfilling an expressive-symbolic purpose (Chion and Gorbman 2019). The soundtrack follows the protagonist’s mood and condition, conveying feelings that are contextual to the situation portrayed in action. Rather than providing realism to the creation, such background music seems intended to increase the empathic dimension conveyed by the interactive map.

The Fictional Chat Box

The bulk of Migration Trails’ fictional content resides in the visualisation of the chat box (a standard messaging interface popularised by services such as Telegram and WhatsApp). The conversations—written beforehand by the author—appear progressively on the screen, reporting messages sent by two migrants to their respective relatives. The messages pop up in the chat box over the course of ten days, and the text flow is unidirectional, featuring only messages composed by the two fictional protagonists.

The male character, David Ighiwiysi, delineates an ambitious Nigerian man with a prominent entrepreneurial attitude. His business aspirations

appear as the straightforward, main motives prompting his trip through Libya, Italy and France. In parallel, his messages display strong networks of family relations and fraternal bonds that tie him to his home country.

The second fictional protagonist, Sarah, a 19-year-old Syrian, exchanges messages with her brother while proceeding through the “Balkan Route”. As her red dot moves on the cartographical visualisation, she fictionally crosses Turkey, Greece and Germany, constantly updating her brother on her whereabouts. The introduction of a female character provides an often-disregarded gender perspective: traditional coverage of Syrian asylum seekers prioritised visual representations of large groups of men, images that were fed intentionally or unintentionally into the trend of portraying foreign others framed as security or economic threats (Amores et al. 2020, 291–314).

Extracts from Sarah’s chat box

Omar! No not yet, we’re still at home, Mum managed to make us some koussa mehshi for our final meal, going to miss this so much! ... Omar I can’t stop visualizing their faces, I’m so sure Dad was holding back tears!

Hi, fell asleep! Soooo Sorry. Promise!

I need to thank you for getting me through the day. I love you so much Omar. You gave me so much strength.

Throughout the 10-day experience, David and Sarah report on their journeys to Europe. Through the vehement exchanges with their relatives, the migrants describe violent police raids and threatening encounters with hostile individuals. At other times, they tell of particularly generous deeds: spontaneous acts of individuals and NGOs that help during the journey. The fictional chats allow Migration Trail to delineate the complex relationships between migrants and their smugglers, possibly going beyond the stereotypical portrayal of unambiguous exploitation. If the migrants’ contempt towards reckless smugglers features heavily in their initial exchanges, throughout the days, they recognise how smugglers, notwithstanding their costly services, are key enablers for their movement.

Extracts from David’s chat box

So, our guy Samir is connected to Mo who is the Libyan guy in charge of the boats... We can pay less if we want to go on a boat without GPS. They both have to make profit so they need enough people on a boat to make it. [...]

He doesn't have a smuggler so he cannot be smuggled into a goods yard where they can put it inside goods crossing the channel.

The text exchanges appear both on the website and through instant notifications on Facebook, until the end of the tenth day of the journey. Closing banners signal the conclusion of the experience, informing the users that Sarah has reached her final destination in Berlin and can successfully proceed to claim asylum, whereas David remains stranded in Calais, having failed previous attempts to reach the UK.

Spatial Data Visualisations

Along the 10-day virtual trail to Europe, the website progressively unlocks access to 18 spatial data visualisations: different maps that explore datasets displayed along national borders. Each tab—combining spatial statistics and a text frame—answers a particular question on migration, with widespread use of colour saturation and gradient. As van Leeuwen suggests, colour is frequently used in data visualisation to express emotive significance (van Leeuwen 2011, 563). In such displays, red is frequently connected with inaccessibility and isolation, whereas green often represents wide-ranging freedom of movement. Migration Trail exploits the communicative potential of the gradient and saturation to express intensity, with darker red countries granting their citizens the least degree of international mobility. For instance, in the dataset “Who needs a visa to visit the Schengen zone?”, states are colour-coded to show the potential for their citizens to enter the Schengen area. Countries with no visa required are bright green, whereas countries whose citizens must fulfil visa requirements range from light pink to dark red, depending on the chances of receiving permission. Analogous colour schemes occur in each of the 18 cartographical views.

A rectangular switch allows users to shift among the different sets of geographical data. Users can quickly interchange between visualisations such as “Where can Syrians go without a visa?” and “World GNI per Capita”, whereas the variations between the datasets are reflected in the

countries' varying levels of colour saturation. Unsurprisingly, some visualisations (i.e. "Unemployment Rate around the World" and "Which are the Best and Worst Passports to Hold") show correlations and overlaps, with rough matches occurring throughout the 18 visualisations. Repetitive tones demonstrate patterns of nations that tend to lag behind in many indicators (GDP per capita, employment...), thus powerfully shedding light on enduring patterns of global inequalities.

Each dataset links to a different Migration Trail podcast, a ten-episode broadcast that features extensive contributions by officials, activists and migration scholars: complementing the fictional narration of the two trails with migration professionals' authoritative standpoints. Overall, this extensive collection of interviews attempts to give a systematic account of the structural conditions of migration. The underlying narrative clarifies how migration is an enduring phenomenon that is set to persist because of conditions of global destitution and social inequalities, but also because of shifting aspirations arising from development (Van Heelsum 2016, 1301–1309).

THE ETHICAL, POLITICAL AND METHODOLOGICAL CONCERNS OF MIGRATION TRAIL'S FICTIONAL ACCOUNT

After thoroughly describing the website's elements, in this section we discuss their dynamic interplay, scrutinising the interactions of all multimedia elements that contribute to the website narrative. Migration Trail's main written communication consists of the two migrants' fictional conversations with their relatives: the protracted exchange of short texts is visually rendered through a live instant messaging feed that appears on the website chat box. Caine et al.'s work helps viewers to appreciate such unusual rhetorical choices for a cartographical effort. In their understanding, the use of fiction can create a new layer of empathy to deepen consciousness and provide a unique way for creators and participants to understand experiences (Caine et al. 2017, 215–221). Fiction, therefore, might allow a different kind of reaching out, contributing to the creation of a more humane connection with the audience. Designing a fictionalised world might vividly tighten the relationship between creators and participants, exposing further imagination and playfulness. By spreading the transmission of the fictional texts over 10 consecutive days, Migration Trail distributes the users' engagement over time, possibly prompting

a longer sedimentation of the meaning along with deeper knowledge reflection and consumption.

Beyond its communicative potential, the use of fiction on the website certainly responds to the need to conceal vulnerable individuals, protecting them from dangerous public exposure. The website displays a disclaimer informing viewers that “the characters in the data visualization are fictional but based on true stories. Some locations relevant to the story have been concealed in order to protect vulnerable people”.³ This sentence connects the use of fiction with the need to address ethical concerns. Clandinin (2013), among others, notes how fiction can serve to shield participants from being identifiable, especially when they disclose tension-filled accounts of personal experiences (*ibid.*). For Claudia Mills, the power of sharing real-life accounts should always be evaluated against the potential dangers of embarrassing or betraying others (Mills 2004, 101–120). The writer or creator needs to behave as a responsible moral agent who seeks to reduce possible harm (*ibid.*).

Simultaneously, Cosgrove notes how, at times, fiction writers might have “escaped scrutiny in the ethics debate because the subjects under analysis — characters — are not real” (Cosgrove 2009, 1–134). In response to this, the same author proposes that writers should consider ethics of representation when discussing the narrative aspects of fictional stories. This also extends beyond traditional writing, to creators of fictional narrative content. Especially because of the engaged tone of *Migration Trail*, the ethical repercussions of its fictive narrative must be carefully evaluated. Such a critique should not disregard that, to successfully challenge existing power relations, fiction must go beyond archetypal portrayal of vulnerable groups: prompting the audience to recognise that their understanding might not be exhaustive and dissuading them from more explicit-meaning correlations and judgements (Chouliaraki 2006). As suggested in the following sections, a thoughtful evaluation of *Migration Trail*’s narrative intent highlights important shortcomings that may possibly hamper its genuine idealistic commitment.

A first level of concern certainly connects with the ethical dimension of engaging with fiction to promote “a better-informed discussion about migration to Europe” (Killing 2018, 33). On the one hand, the widespread belief that fiction writers are given “poetic licence to break ordinary moral rules in the service of artistic creation” might induce scholars to neglect the ethical examination of fictional accounts because of their imaginary, made-up content (Mills 2000, 195). On the other

hand, insurgent writers—those committed to improving public discussions about migration—should reasonably use such “poetic licence” to actively promote a new ethics of representation: using the fictional, imaginary potential of storytelling to show what is normally hidden from the public. In *Migration Trail*, the representation of two characters is regrettably not endowed with less typical profiles that could possibly have promoted better-informed discussions about migration to Europe.

Tellingly, *Migration Trail*’s David is portrayed as the quintessential economic migrant: particularly in relation to his reasons for embarking on the journey, his character retraces certain elements of clichéd stories on his quest to individual success that corresponds well with traditional European or Western imaginaries. David’s “dream of starting a business” and joining his brother, who reached England as “a budding footballer”, is reminiscent of certain traits of migrants’ caricatural descriptions of individuals as those ready to “get rich or die trying” (Shrestha 2020, 1–27). Similarly, Sarah represents a young Syrian woman with excellent grades at school, craving to enrol in a German university to “study Law or Political Science”. Again, visibility seems to be granted to migrants’ profiles that resonate well with Eurocentric ideas of deservingness: “dreams of individual success, hard-working ethos” (Georgiou 2018, 33).

A second problem regarding the representation of migrants concerns the scarce political agency attributed to the two protagonists. Throughout the fictional narration, the two protagonists refrain from making overtly political statements and never question the border policies that systematically dismiss their citizenship rights. As Killing admits, “they are just people busy living”: they seem to proceed through their dramatic quest with resignation, without challenging the governmental dimension of their exclusion. To a certain extent, *Migration Trail*’s accounts appear to support frames of vulnerability and threat, failing to question traditional representations of undeserving “illegals” seeking access to the European continent. Such accounts give travelling and mobility agency without offering political agency and might produce an unwanted naturalisation of migrant’s conditional existence in Europe (Georgiou 2018).

As previously explained, the fictional chat box tells the story of two individuals introduced as a male economic migrant from Nigeria, and a female asylum seeker from Syria. The 10 narrated days culminate in a successful ending for the Syrian woman, who manages to reach Germany, whereas the Nigerian economic migrant remains stuck in Calais with few

future prospects. Such highly dichotomous portrayals therefore risk replicating governmental divisions of individuals as deserving/undeserving of EU access and assistance: a framing that Migration Trail's creator wanted to challenge by working with "writers from Nigeria, Lebanon and Afghanistan to develop these characters and to write the migrants' voices" (Killing 2018, 33). As Tacchi notes, successful politics of recognition necessitate deep transformations in the orderly structure of voices and attention conferred on vulnerable actors and communities (Tacchi 2012, 225–241). This third problematic aspect of Migration Trail's narration therefore involves such attributions of voice: the decisions to identify and empower who gets to speak. Despite consulting an international pool of writers and ostensibly giving voices to two migrants, Migration Trail's fictional representations appear as yet another attempt to talk about migrants rather than letting them speak. Although such fictional engagement proficiently attempts to personalise migrants' faith and render their humanity, it also fails to provide a solid alternative to the Eurocentric standpoint of conceiving migration as a "problem" requiring authoritative and unequivocal remedies. Once again, the recognition of one more space of appearance does not seem to correspond with a full-fledged attribution of voice and an exhaustive turn of narrative point of view. In these regards, other militant-engaged initiatives substantiate how a fruitful collaborative process of co-creation can help address the many ethical, political and methodological concerns posed by the contemporary media productions regarding migration (e.g. Mekdjian and Szary 2018; Nikunen 2020). For instance, in one such project, Mekdjian's "Crossing Maps", the autoethnographic research involving a collaboration of migrants, academics and storytellers seems to pave the way for more coherent reflections on narratives about migration that distance themselves from stereotypical portrayals.

These three problematic dimensions could, to some degree, hamper the project goal to experiment with "how to create a better-informed public discussion about migration to Europe" (Killing 2018, 33), and reproduce some of the most typical shortfalls of traditional data visualisation, cartography and fiction about migration (Risam 2019, 566–580). When questioned on the topic, Killing appeared aware of the shortcomings and attributed them to the limited resources granted to the initiative. The initial idea included showing ten characters instead of two, a factor that probably would have allowed for more diverse accounts:

multiple stories that, indeed, could have more clearly highlighted the many complexities of human mobility.

Beyond the thorny issues just signalled, the website's driving narrative certainly constitutes an effort to re-humanise migrants' representations. The creator explicitly employs the fictional story to plunge the user into the private sphere of the migrants, exposing viewers to the individuals' family relations, and uncovering their aspirations, fears and hopes. The narration underlines the two characters, detailing their industrious attitudes, kinships and social capabilities, along with their personal expectations and fears. The two personal accounts appear, in these regards, as manifest efforts to counter the symbolic duality of the figure of the migrant, who, in traditional media, oscillates between the voiceless victim and the threatening other (Chouliaraki et al. 2017, 1–35). To re-humanise the migrants' quest, the main cartographical view is infused with graphical dynamic elements that highlight the epic dimension of migratory journeys, resisting the narrative of migrants as problems or mere statistical units (Madörin 2020, 698–711). Migration Trail makes full use of the possibilities of the digital medium to display a vast amount of interactive geospatial data: wind strength, battery level of the migrants' mobile phones, GPS coordinates of previous migrants' shipwrecks, along with other animated symbols that cast light on the everyday experiences of those on the move.

CHALLENGING TRADITIONAL MEDIA PORTRAYALS?

Besides the threefold problematic of migrants' representations in the fictional chat box, several other elements of the website are more successful in challenging traditional media portrayals of migration. Visual representational signifiers are key for contextualising David and Sarah's trails on the main map: a multiplicity of dynamic elements, indicators such as wind speed and direction, aircraft routes and the data visualisation of the “power” of a Nigerian passport, present the user with a paradoxical contrast. They signal the abundance of legal, secure connections between European States, but also accentuate the reduced “capabilities” of the two protagonists embarking on such a hazardous journey.

Eighteen spatial data visualisations subvert hegemonic mapping practices, assuming the migrants' subjective point of view rather than the more common “EU border securitisation” perspective. In Migration Trail,

colours highlight the reduced citizens' rights that migrants possess as travellers, reversing traditional map colour coding that often uses gradients and bold arrows to highlight the urgency of the migratory crisis. From a Nigerian citizen's viewpoint, most of the world is dark red: their passport is of little to no value, as it does not grant access rights to many countries. Such data atlases emphasise illegal migrants' *bare life*, subjects that, in Agamben's understanding, are alive but exist under circumstances with stripped-down citizenship rights (Agamben 1998).

Data visualisations communicate a powerful message, addressing structural and historical conditions underlying human mobility: visualisations that attempt to counter the narration of migration as an "unprecedented crisis", a contested framing that signals abrupt and disturbing events (Krzyżanowski et al. 2018, 1–14; Hiltunen 2019, 141–155). Such "crisis" discourses divert attention away from complicated, structural and historical developments of human mobility, a phenomenon that arguably has never ceased throughout history and encompassed a much more extensive geographical scope than Europe (Krzyżanowski et al. 2018, 1–14). "Crisis" narrations, perversely, denote humans flooding through lands and seas, along with peaks of illegal border crossings: problematic events that must urgently be governed, halted and prevented.

To add context to the spatial data visualisations, Migration Trail's podcast provides the audience with thorough background clarifications, situating the narrative of the two fictional characters within the structural processes of migration, and mitigating the imagined adventure described by the textual descriptions. Ultimately, the interplay of the three modes—the visual, textual and sound elements—jointly provide meaning for the whole construction, constituting, as mentioned above, a highly complementary constellation.

Finally, it is relevant to reflect on Migration Trail's relation to the general media ecosystem that shapes European public discourses on migration. In this regard, Migration Trail's dynamic interplay of fictional chats, data visualisation and cartography represent an original attempt to convey migrants' journeys in the digital realm. Nonetheless, it must be noted that migrants' narratives in the European digital media sphere reflect "an ordered space of representation and recognition" (Georgiou 2018, 55). In this domain, power relations are well cemented and often consign original, independent "spaces of witnessing" to the side-lines of the digital public sphere (Horsti 2016, 1–20). In this vein, Migration Trail certainly suffers from a lack of public visibility, evidenced by the limited

popularity of the website (i.e. presented in November 2017, Migration Trail's podcast has had less than 3000 plays overall—accessed in March 2021). Such limited reach certainly dilutes the claim of potentially positively impacting the European news media coverage about migration. Once again, the diversification potential of DIY media initiatives must be carefully measured against the persistence of media hierarchies that “shape and skew coverage” (Thussu 2014, 733).

Still, when assessing the potential of such an experimental production, it might be appropriate to consider that, despite being a niche production, Migration Trail could possibly have paved the way for a new composite genre of creations being picked up in the migration-media landscape. In this spirit, the Dutch newspaper *De Correspondent* blended a long-form traditional article with screenshots of the journalist's personal WhatsApp chat with 12 migrants (Vermeulen 2020). The piece included intimate snapshots of the migrants' lives following their forced repatriation after a failed attempt to reach Europe. As in Migration Trail, a textual chat box signals an effort to humanise and personalise a traditional report on migration.

CONCLUSION

This chapter aimed at presenting an in-depth description of how Migration Trail combined data visualisation, fiction and cartography, to provide an original portrait of human mobility. More specifically, the discussion attempted to clarify how fictional elements, in combination with geospatial data visualisations, and audio contents, could challenge the processes of migrant othering present in many media productions on migration. In the first stage, this work was intended to thoroughly map Migration Trail functions, describing the website's content while understanding its dynamic interplay of multimedia elements. This allowed us to detail how the site operates, explaining how verbal, visual, textual and sound elements work together to deliver the communicative message.

The fictional chat box provides the opportunity for a prolonged emphatic involvement of the audience: prompting a protracted exposure to the story, and engaging users in a 10-day reflection on migration. In parallel, political data visualisations and the podcast give migrants' journeys a comprehensive context. They present the user with a paradoxical contrast, describing the abundance of legal connections to Europe and highlighting at the same time, how most migrants find them difficult to

access. The interplay between these multiple modes of communication indicates how Migration Trail possibly transcends the label of a mere mobile-mapping exercise (Van Houtum and Bueno Lacy 2020, 196–219), effectively combining supplementary features that are commonly associated with both counter mapping and deep mapping.

A thorough analysis of the narratives embedded in the website subsequently investigated how Migration Trail confronted the ubiquitous othering of migrants. In this respect, the study highlights the attempt to re-humanise the migrants: with a clear intention to deliver the emotional, private domain of migrant lives, while rendering their expectations, fears and hopes. The narrative puts a strong emphasis on the two characters in manifest attempts to counter the symbolic duality of silent migrants: David and Sarah are neither voiceless victims, nor threatening others. They are industrious people, constantly negotiating between their original aspirations and capabilities: human beings who have set objectives and life goals and are striving to reach their destinations and achieve their purposes (de Haas 2011).

At the same time, a careful evaluation of Migration Trail's narrative intent highlights important representational shortcomings that possibly weaken its original commitment. Three levels of ethical, political and methodological concerns signal the reoccurrence of dangerous, stereotypical frames: avoidable portrayals of migrants that do not fall too far from ordinary media coverage. To illustrate, certain traits of the Migration Trail fictional narrative seem to recycle conventional ideas of migrants' deservingness: granting exclusive visibility to individuals who conform to traditional European or Western imaginaries. In parallel, the fictional narrative side-lines any expression of political statements, unconsciously naturalising the migrants' conditional existence in Europe. Thirdly, despite the innovative first-person narrative obtained through fictive SMS conversations, the account emerges as an attempt to talk about migrants rather than letting them speak. In this regard, other collaborative examples appear to have more proficiently cooperated with migrants, academics and storytellers to create truly authentic spaces of witnessing.

Despite these shortcomings, Migration Trail undoubtedly represents an original attempt to re-humanise migrants' narratives in interactive spatial data visualisations. To this end, maps were carefully conceived to represent powerful contextual elements. They help Migration Trail to challenge the Eurocentric narrative on the risks associated with non-EU

immigration. Alison Killing assumes the migrants' subjective point of view and, with visual and sound signifiers, her project highlights the limited legal and financial opportunities from which migrants can benefit. Political maps recall the exclusive nature of EU border policies, a framework that illegalises human mobilities and marginalises migrants as excluded bodies.

Overall, Migration Trail emerges as a website that fruitfully narrates two compelling stories that mix political data visualisations, interactive cartography, fiction and a podcast: an exceptionally hybrid creation that could set a positive precedent for a new strand of composite narrative efforts. It could potentially provide a useful template for future efforts to narrate urgent themes that, like migration, have strong human, political and geographical components, such as climate change or the rise of global economic inequalities.

NOTES

1. "TOPOLOGICAL ATLAS" accessed 8 March 2021. <http://www.topologicalatlas.net/>.
2. "407 Camps" Mahaut Lavoine, 21 May 2019. <https://mahautlavoine.com/index.php/407-camps-index/>; Kaneza Schaal, 2020. <http://kanezaschaal.com/works/cartography/>; "Crossing Maps". The antiAtlas of borders, 13 December 2017. <https://www.antiatlas.net/crossing-maps/>.
3. "Migration Trail," Alison Killing, 2018, accessed 8 March 2021. <https://www.migrationtrail.com/>.

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