Article

Beyond the Migrant "Problem": Visualizing Global Migration

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Abstract

An area that has received comparatively little attention, in both postcolonial digital humanities and its overlap with studies of media and migration, is how geo-spatial data visualizations contribute to the othering of the migrant and how they can be used, in turn, to challenge the instantiation of the migrant as a "problem." Positioning data visualizations of migration as a narrative genre, this article considers how data visualizations of migration reinforce the trope of migrant-as-problem and how they might resist this inscription. Through multimodal rhetorical analysis of data visualizations of migration, I examine the interplay of written-linguistic, visual, and spatial modes of communication deployed in two approaches to visualizing migration and propose that the contexts of collaboration behind their composition influence their representation of the migrant as a "problem" and hold the power to resist this narrative.

Keywords

migration, data visualization, mapping, digital humanities, digital rhetoric, composition

In his foundational meditation on race in the United States, *The Souls of Black Folk*, W.E.B. Du Bois ([1903] 1999, 5–6) proposes that the unasked question that separates African Americans from the rest of the world is "How does it feel to be a problem?" Du Bois' heuristic has been used to articulate multiple forms of race and ethnicity-based othering, such as in Moustafa Bayoumi's (2009) study on young Arabs in the United States, whose identity has been figured as a "problem" in the wake of the September 11, 2001 attacks. In public discourse in the Global North, the migrant is

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frequently positioned as a "problem" as well. As Bridget Anderson (2017, 1535) notes, "'The migrant' is often a placeholder, marking memories of empire, or fears of globalization, or a sense of impending catastrophe." From the Brexit campaign's claims that refugees and asylum seekers threaten the United Kingdom's financial health and security (Cooper 2016; Hall 2016) to United States President Donald Trump's xenophobic invectives about immigration (Beydoun 2018; Pomfret 2018) to the rise of neo-fascist and populist political parties in Europe (Barbière 2018; Bennhold 2018), the migrant becomes the repository of the anxiety, fears, and racism of dominant cultures threatened by an "other." This narrative is compounded by its reproduction, circulation, and amplification in media and mass communication.

Scholarship on the mediated migrant has challenged inscriptions of the migrant as a "problem." Dana Diminescu's (2008) articulation of the "connected migrant" asserts the inextricable link between migration and media. A range of media approaches to migration have considered representation in news media (Madianou 2014), self-representation through new media (Chouliaraki 2017; Risam 2018b), use of mobile technologies by migrants (Gillespie et al. 2018; Zijlstra and Liempt 2017), gendered media practices by forced migrants (Witteborn 2018), and the influence of digital crossings on identity, borders, and affect (Ponzanesi and Leurs 2014), among others. These interventions are important contributions to postcolonial digital humanities, a theoretical approach to understanding the relationship between technologies, colonialism, and neocolonialism (Risam 2018a, 4). Furthermore, this scholarship resists public discourse that uses migrants' media practices to delegitimate their rights, such as raising doubt over asylum seekers' true need for refuge by virtue of their ownership of smartphones (Leurs 2017; Leurs and Ponzanesi 2018; Literat 2017).

An area that has received comparatively little attention, in both postcolonial digital humanities and its overlap with studies of media and migration, is how geo-spatial data visualizations contribute to the othering of the migrant and how they can be used, in turn, to challenge the instantiation of the migrant as a "problem." Positioning data visualizations of migration as a narrative genre, this article considers how data visualizations of migration reinforce the trope of migrant-as-problem and how they might resist this inscription. Through multimodal rhetorical analysis of data visualizations of migration, I examine the interplay of written-linguistic, visual, and spatial modes of communication deployed in two approaches to visualizing migration and propose that the contexts of collaboration behind their composition influence their representation of the migrant as a "problem" and hold the power to resist this narrative.

Data Visualization as Narrative Genre

Access to new digital tools and platforms that facilitate the mapping of data for even novice users, along with the increasing availability of data sets that can be used for these purposes has been heralded with great enthusiasm by both academic and public audiences alike. What sometimes gets lost in the excitement over such visualizations is attention to the ways that they are still representations. Scholarship on the semiotics of data visualization has addressed such issues. For example, Helen Kennedy and

Rosemary Hill (2016) have proposed that excitement over big data and neoliberal academic labor practices have led to the production of ineffective visualizations. Kennedy, Hill, Aiello, et al. (2016, 17) further argue that the choices that those designing data visualizations make are constrained by the conventions of visualization, which, "sometimes work to undermine the good intentions of visualisers, by imbuing data with a sense of objectivity." Together, these features lead to the challenge identified by Kennedy, Hill, Allen, et al. (2016), where socio-cultural factors influence how users engage with data visualizations. In line with this research, I examine data visualizations of migration as a genre through the lens of narrative, using multimodal rhetorical analysis. As a narrative form, this genre requires new methods of analysis to understand how decisions made by their creators make arguments and tell stories about the world.

Data visualization has gained a foothold as a method of visually communicating data to multiple stakeholders and publics. To take a data set and visualize it is to offer graphical representation of the data, which can take many forms—histograms, charts, networks, maps, and other arrangements. Data visualization offers a way for audiences to see beyond numbers and data points through the use of visuals, giving rise to potential interpretations through its depiction of patterns, connections, and trends within data. As Michael Friendly (2007) notes, while data visualization is often understood as a contemporary practice, it is in fact one with a long history. Friendly's narrative, albeit a Eurocentric one, traces the emergence of statistical and computational data visualization through ancient Egyptian map-making with coordinates, medieval plotting of relationships between tabular data, early modern line charts, Enlightenment era histograms, and the more abstract statistical graphs in the nineteenth and early twentieth centuries that influenced Edward Tufte, who is widely considered to be a data visualization pioneer.

The advent of data journalism marks the movement of data visualization into public channels of communication. From complex infographics to interactive visualizations, data journalism responds to the growing amount of data that can be used to tell stories and provide greater insights on the pressing news of the day (Bradshaw 2015; Coddington 2015; Gray et al. 2012; Mair and Keeble 2014; Young et al. 2018). While the use of data itself by journalists is not new, the deployment of data visualizations as a journalistic genre is a recent phenomenon, marked by newsrooms assembling data journalism teams and producing visualizations to accompany—or often, tell—news stories. Recent awards, such as the 2017 Pulitzer Prize for Public Service, awarded to *New York Daily News* and *ProPublica* for Sarah Ryley's reporting on eviction, and the 2018 Pulitzer Prize for International Reporting, awarded to Clare Baldwin, Andrew R.C. Marshall, and Manuel Mogato of *Reuters* for "Duterte's War," demonstrate the integration of data-driven journalism into the industry.

The translation of data visualization into data journalism emphasizes that visualizations can be understood as a form of data narrative. As such, data visualization has become one of the most potent and powerful genres of new media, as computationally assisted, interactive forms of mass communication. As a narrative genre, data visualization is defined by a range of unique features. Lee et al. (2015) articulate a broad

process for data storytelling, from exploring data to identifying insights to transforming them into a story to communicating the story to an audience. Data visualizations, as Edward Segel and Jeffrey Heer (2010) argue, produce narratives that emerge from the interplay of direct messaging by text and image and discovery through user experience. Robert Kosara and Jock Mackinlay (2013, 48) describe these as "storytelling affordances," which entail "features of a visualization that provide a narrative structure and guide the reader through a story." Some of these structures are more directive than others, depending on the level of guidance in user experience. The narrative structure itself relies on what Nahum Gershon and Ward Page (2001) describe as visual metaphors akin to communication through film and other forms of media premised on moving images. Kwan-Liu Ma et al. (2012) further argue data visualizations deploy literary and theatrical narrative conventions to facilitate storytelling. These features of data visualization explicitly call attention to the constructedness of visualizations. Despite the assumptions that audiences bring to them—that they are objective or neutral presentations of data—they are, in fact, mediated forms of data. As such, they are narratives constructed through both the explicit and tacit decisions undergirding their construction. These range from the selection of data sets to the use of multiple modes of communication, such as textual, visual, and spatial, that influence users' experiences of discovery.

As narratives, data visualizations are no less imbued with power, politics, or cultural norms than other texts. The same is true for geo-spatial data visualizations of migration. When visualizations are designed to represent human migration—whether this movement is free or by force—we must attend to both the tensions between maps and data that are inevitable in any geo-spatial data visualization and the ethical dimensions of representing vulnerable communities. We must consider the explicit and implicit rhetorical choices that their creators make in the composition process to lay bare their ideological positioning and their discursive contributions to public conversation around migration as mediated forms of communication. And, in turn, we must consider alternative practices that resist the inscription of migrants as a problem.

Interpreting Migration Visualizations

There are several quite obvious ways where the implications of power and dominant cultural norms are at play in the genre of migration data visualization: in the data and in the maps that are used. Certainly, there are critical dimensions of the data: who collected it, for what purposes, with what goals in mind; what is and is not being collected; what terms are used; and how terminology influences the data being collected (Birman 2006; Block et al. 2013; Jacobsen and Landau 2003; Kabranian-Melkonian 2015; Metcalfe and Dencik 2019). Meanwhile, as cultural critics and critical cartographers have argued, maps have long been intertwined with political power, both in national and international contexts (Crampton 2009; Crampton and Krygier 2006; Lammes et al. 2018; Moore and Perdue 2014; Neocleous 2003). As the legacies of imperialism show, the act of map-making is at once an exercise in world-making. Maps not only construct representations of the world but are tools of conquest that

indelibly shape epistemologies and the ways in which we know the world, particularly in narrative form (D'Haen 2011; Huggan 1994; Stone 1988). Thus, cartography has been implicated in the legitimation of the state and its claims to authority, belonging, and, of course, land. The same is true for digital mapping, which has been examined as a form of new media (Lammes 2016; Pink and Hjorth 2012; Sui and Goodchild 2001). However, these technologies have opened up possibilities for participatory mapping and collaborations with communities and stakeholders that hold potential for writing back to dominant knowledge structures subtending mapping (Bargués-Pedreny et al. 2018; Gordon et al. 2016; McLean et al. 2016; Salovaara 2016; Thom et al. 2016).

While there have been several studies of data visualizations specifically about migration, they have not focused on the narrative dimensions that make data visualization a potent intervention in mapping migration. Rather, they have emphasized guidelines for journalists using data visualization to represent migration (Adams 2018), assumptions about migration conveyed through these visualizations (Allen 2017), the role of collaborative cartography in mapping migration (Scheuing 2017), and data visualization for human rights advocacy (Rall et al. 2016). However, analysis of the narrative dimensions of migration data visualization is critical to understanding how the rhetorical choices made by their creators produce arguments about migration that have the power to frame the migrant as a "problem" or to resist this phenomenon.

Focusing on the choices made by composers of migration digital visualization through the lens of narrative, this article uses multimodal rhetorical analysis to shed light on the pitfalls and possibilities of visualizing global migration as a genre. Gunther Kress' (2009) work on modes is essential to understanding how multiple channels of communication converge into multimodal assemblages. For Jeff Bezemer and Kress (2008, 171), a mode signifies "a socially and culturally shaped resource for making meaning." The New London Group (1996) argues that there are five primary modes of communication: written-linguistic (e.g., text), visual (e.g., static images), audio (e.g., sound), gestural (e.g., bodily movements), and spatial (e.g., moving image and organization). In media like film, multiple modes converge and interface with each other to produce a multimodal text. The same is true for data visualizations, which are composed of multiple modes of communication, such as written-linguistic, visual, and spatial modes.

While theories of multimodality have influenced a range of methods, including critical discourse analysis, I position the methodology engaged here in the context of rhetorical genre studies (Benoit 2000; Berkenkotter and Huckin 1995; Miller 1984; Schryer 2011), an interdisciplinary approach to composition that, according to Anthony Paré (2002, 57), draws on the notion of genre to "fuse text and context, product and process, cognition and culture in a single dynamic concept." Furthermore, in rhetorical genre studies, Carolyn Miller (1984) argues, genre is a form of social action. As such, a genre is produced not only through the rhetorical choices that composers make but also through their social positioning, which influences norms of communication. In the context of multimodality, rhetorical genre study facilitates an understanding of genre that is both flexible and socially situated (Arola et al. 2014; Ball 2012; Selfe and

Horner 2013). Approaching map-based data visualizations of global migration as a narrative genre, this study examines the multimodal—written-linguistic, visual, and spatial—choices made by their composers in relation to the contexts of collaboration in which they were composed. Together, these choices and contexts influence their representation of the migrant as a "problem."

A Tale of Two Visualizations

As a genre, data visualization of migration takes a range of forms, which include but are not limited to taking existing data sets and creating visualizations without collaboration with the entities that collected the data or with migrants themselves and co-creating visualizations with migrants through participatory projects. The genre is defined by shared characteristics: the presentation of data related to migration, the framing of the stakes and politics of migration through text (the written-linguistic mode), the use of maps based on Cartesian coordinates (the visual mode), and the deployment of moving dots or lines (the spatial mode) to represent movement. The projects examined here—"The Flow towards Europe" and "Crossing the Mediterranean Sea by Boat"—provide examples of each of these approaches and were selected because they are multimodal data narratives of migration that are representative of the effects of their contexts of collaboration. They demonstrate that noncollaborative approaches ("The Flow towards Europe") and collaborative methods ("Crossing the Mediterranean Sea by Boat" 2017) influence the representation of migrants.

The practice of using existing data sets to create visualizations is typified by "The Flow towards Europe," a visualization produced by Lucify (2018), a Finnish startup that develops data visualization tools. The project uses a data set from the United Nations Refugee Agency (UNHCR) and has developed a visualization that depicts waves of migrants, represented by dots, traveling from countries in Africa, the Middle East, and Asia toward Central Europe. While this data visualization was not created by academic researchers, it reflects the broader challenges of researchers visualizing available data sets, which can be seen in other projects like "Refugees by Mediterranean Sea" (2019), a visualization of living and dead migrants, created by the CREATELab at Carnegie Mellon University. In particular, it demonstrates how compositional choices made using written-linguistic, visual, and spatial modes participate in dehumanizing of migrants. Moreover, "The Flow towards Europe," like similar visualizations, was designed without collaboration with agencies engaged in data collection or without migrants themselves, and its noncollaborative practices engender a lack of context and Eurocentric framing of migration that reinforces the narrative of migrants as a "problem."

From its landing page, "The Flow towards Europe" deploys written-linguistic cues that present the migrant as a problem narrative. As the note accompanying the project states, "Europe is experiencing the biggest refugee crisis since World War II. Based on the data from the United Nations, we clarify the scale of the crisis" (Lucify 2018). The choice of "crisis" as a written-linguistic cue contributes to the impression that migrants are a problem. This phenomenon is akin to one described by Stuart Hall et al. (1978),

in which British media produced a "crisis" of "mugging" in England, inflaming racist discourse against black Britons. In turn, such manufactured "crises" become a self-justification for policing the crisis.

Moreover, the linguistic choice to use "refugee" obfuscates the complexities of migration, particularly around categorization of migrants, which misrepresents the data used for the visualization. The visualization provided in "The Flow towards Europe" depicts flows of asylum seekers to European countries over time. Hovering over individual countries shows details including the number of people who have left or arrived in a country since 2012. The visualization omits other categories of forced migrants that are not in the data set—so the scale of migration is actually quite higher. For example, the 5.6 million Syrian refugees registered by the UN Refugee Agency are not represented. The written-linguistic cues that are not included are as critical as those that are. In a visualization purporting to be depicting a "refugee crisis," it is curious that the category of Syrian refugee would be omitted and that the composers do not make that fact legible. Subtending the visualization, as well, is a slippage between migrant categories and, in turn, an elision of difference. Also missing are the contexts of migration that would humanize those represented in the data set, such as human narratives that speak to how they migrated, migratory routes, and the political, economic, and/or social reasons behind their migration. This is the result of an approach that takes data sets and visualizes them without clearly situating the stakes and challenges of this noncollaborative approach.

The visual rhetoric of "The Flow towards Europe" further contributes to the narrative of the migrant as a problem. As is typical in the genre of migration data visualizations, the primary visual choice made by composers is the use of a map. What that map looks like—which continents and countries are centered and which are displaced, the color scheme, size choices, and the types of maps (political, physical, topographic, etc.) selected—are all contributing factors to how migration is represented. "The Flow towards Europe" features European countries and thus the Global North front and center, with the countries in Africa, Asia, and the Middle East that are the primary sources of migrants offset. In this regard, the Eurocentric nature of the project is reinforced by its visual mode. The color scheme of the map, in dark hues of navy blue bodies of water, black countries, and green national borders, reinforces the foreboding conveyed in the written-linguistic invocations of "crisis." Use of a political map absent of topographical features emphasizes national borders and depicts cohesion of the nation state (however fictive).

Along with such visual cues, the spatial mode, in turn, emphasizes a violation of borders and nation states effected by migration as migrants, represented in forms such as dots, lines, and arrows disrupt the map. For "The Flow towards Europe," dots representing 25 migrants move across the map, traversing borders. The choice to group migrants by 25 was determined by the limitations of the visualization platform and the creators' sense that if each migrant were represented by a dot, the visualization would be too crowded and create performance issues (Lucify 2018). The dots appear as unimpeded waves, emphasizing the magnitude of migration. However, this is a poor representation of routes of migration, which take many more forms than travel from point A

to point B, and thus misrepresents migration. In addition, migration does not occur uniformly over time in the flows depicted in the visualization. Because the UNHCR data are monthly, the composers evenly distributed migrants throughout each month then created departure dates—not in the data set—based on arrival date, distance traveled, and speed. For the latter, they used average human walking pace—despite the fact that migration occurs by multiple means of transportation. The result is a narrative of uniform waves of migrants over time, inflaming the written-linguistic invocation of "crisis." Furthermore, the conversion of migrants into dots is a move that is dehumanizing, stripped of contexts that would shed light on the complexities of migration, as apparently seamless flows of pixels across borders elide the difficulties and dangers of forced migration. The transgression of national boundaries by these dots reinforces the antimigrant rhetoric of public discourse that positions migrants as threats to national identity, economy, security, and borders.

Participatory approaches to the migration data visualization genre, in which projects are created in collaboration with migrants, offer a different representation of migration. Through their rhetorical choices, these data narratives resist the dehumanization of migrants; attend to the political, economic, and social contexts of migration; and avoid positioning migrants as a problem. "Crossing the Mediterranean Sea by Boat," a series of story maps created through interviews with over 250 migrants, offers a different vision of migration than those created through nonparticipatory methods like "The Flow towards Europe." In this regard, "Crossing the Mediterranean Sea by Boat" is reflective of similar projects undertaken with migrants, such as "Exodi" (2019), a web map "told by migrants" that tracks migratory routes from countries in Sub-Saharan Africa to Europe. In the case of participatory data visualizations of migration, the written-linguistic, visual, and spatial modes deployed by composers offer a markedly more nuanced depiction of migration than nonparticipatory approaches.

The written-linguistic choices made in "Crossing the Mediterranean Sea by Boat" offer a very different perspective on migration than that in visualizations like "The Flow towards Europe." From the outset, on its landing page, it situates the project as one undertaken by the University of Warwick with funding from the United Kingdom's Economic & Social Research Council. It identifies its participants as, "people who have entered the European Union, or who are contemplating making the journey, by travelling across the Mediterranean Sea without authorisation." Furthermore, "Crossing the Mediterranean Sea by Boat" situates the goals and stakes of the project: "to enhance understanding of the migratory journey and experience, and to assess the impact of policy developments on those that these affect most directly: refugees and migrants themselves." This explicit articulation of the role of migrants in the project and its potential impact on migrants themselves is complemented by the written-linguistic cues used in the story maps themselves.

The written-linguistic content of site navigation for these maps represents migrants in familial and relational terms, such as "brother," "three female friends," "mother of six," "husband, father and son," and "young mother." These details offer humanizing representations of migrants by placing them within social relations. They are also accompanied by details that explain their motivations for migration: "escaping civil

war," "escaping sexual violence," "escaping rejection by parents-in-law," "escaping social ostracism," "escaping terror." Each map traces migratory routes and stops along the way, bringing in the voices of migrants through quotations describing their experiences. Questions to viewers that accompany the maps also emphasize the humanity of migrants: "Unauthorised journeys through Europe are often frayed with dangers, and many have died trying to reach their destinations. Does this change your views on the need to open legal ways for people to travel?" and "On arrival to their destination, many wait long periods during the asylum process while trying to learn about the rules and regulations in a new country. Can you imagine what it feels like to be waiting in this situation?" These questions, while undeniably leading, promote empathy with migrants. Thus, the written-linguistic mode engaged in "Crossing the Mediterranean Sea by Boat" serves dual purposes: shedding light on the political, social, and economic contexts subtending migration while depicting migrants as individuals with lives and stories. The "problem" here is not the migrants but the circumstances that instigated migration.

The choices behind the visual mode of "Crossing the Mediterranean Sea by Boat" also offer a different perspective than "The Flow towards Europe." Rather than a single map on which migration is represented, "Crossing the Mediterranean Sea by Boat" offers a series of maps, each tracing the story of a single migrant or small group. Resisting a totalizing map of migration on which the movement of migrants is overlayed, its multiple maps gesture toward the plurality of migrant experiences and reinforce the individuality of migrants. Together with the written-linguistic mode, however, these individual stories are connected by their combined contribution to understanding the effects of policy on migrants themselves. Individually and collectively, the maps resist the geographical and epistemological centering of the Global North—or of any fixed location—as well. Maps focus specifically on geographical regions within the migratory routes of those whose stories are being told. Within the individual maps, the geographical center is the location in the middle of the journey. The resistance to a single center and to fixed geography is a critical dimension of challenging the centrality of the Global North in narratives of migration.

The decentering of the Global North combined with the spatial rhetoric of "Crossing the Mediterranean Sea by Boat" together resist the dehumanization of migrants and their figuration as a "problem." Unlike the unimpeded flows of dots representing migrants in "The Flow towards Europe," "Crossing the Mediterranean Sea by Boat" features lines depicting routes of migrations and points indicating stops along migrants' journeys. Navigating through a story map, the map recenters at each point, drawing attention to specific locations along the way. This representation resists the seamless depiction of migrants' travels in "The Flow towards Europe" and belabors the arduous nature of the route. The written-linguistic cues linked to each stop further emphasize the difficulty of the journey, both in the words of migrants ("If I knew that it [the Sahara] is desert, then I should have stayed in Niger") and the prompts for users to consider ("Many only learn about the dangers and difficulties of their journey when they have already departed. How would you have felt in this situation?"). Therefore, the multimodal nature of the visualization is essential to its narrative of the humanity

of migrants and to reframing the problem of migration as one of the conditions precipitating migration and the challenges faced along the way.

While "Crossing the Mediterranean Sea by Boat" and similar participatory migration data visualizations resist the challenges of nonparticipatory ones like "The Flow towards Europe," they have their limitations as well. Although they highlight the reasons behind migrants' journeys, they do not get to root causes of political, social, and economic problems. For example, when a stop in "Crossing the Mediterranean Sea by Boat" in Libya is marked by the question, "Violence and exploitation is rife in Libya, particularly against Sub-Saharan migrants. What would you do in this situation?" it fails to recognize the imbrication of colonial and neo-colonial violence—that is, the complicity of the Global North—in contemporary geo-political conflict. Moreover, the question to the user indicates an explicit address to a *nonmigrant* user, one who has not experienced migration and thus has to imagine how they might react. While promoting empathy for migrants through these visualizations is a worthy goal, critical to avoiding the narrative of the migrant as a "problem," such participatory visualizations created *with* migrants were not created *for* migrants.

Conclusion

What can too easily get lost in the drive to visualize migration is fidelity to the humanity of the immigrant and attention to the ways that vulnerable populations can be marginalized through the multimodal rhetorical choices that composers of these visualizations make. This is not only a matter of working with data or the specificities of a data set, but also about the repercussions of design choices that are made when working with human data. As the visualizations examined here demonstrate, the written-linguistic, visual, and spatial choices made in the composition process communicate both explicit and implicit messages about migration. Nonparticipatory methods, such as taking an existing data set and producing a visualization, can all too easily dehumanize migrants and position them as a problem through the interplay of the multiple modes engaged. Participatory methods, which include creating maps with the participation of migrants, can tell a different story, one that draws attention to the political, economic, and social problems subtending migration and reaffirms the humanity of migrants.

While I have focused here on the multimodal rhetorical choices that composers make, there are a number of additional questions that merit further attention in the context of this genre. How might data collection from intergovernmental agencies need to be changed to emphasize the humanity of migrants? Or, perhaps, would concerns about privacy, security, and the policing of migratory routes point to the need for data collection through other, nongovernmental channels that could capture the messy complexities of migration more fully? Could this yield new visualizations that would replace seemingly fluid flows of migrants with less elegant solutions where migrant data could move not in unimpeded waves but in herky-jerky fits and starts—anti-teleological visualizations that would depict journeys uncompleted and failures? What would it mean to use a different kind of map—one without territorial borders or that dispenses with the world map entirely? In line with practices of counter-mapping,

perhaps a different approach would disrupt the ways that users envision mobile populations, reimagine the special relations of migration, decenter the Global North as a site of "crisis," and, in turn, challenge public discourse around migration. This is not to say existing approaches to visualizing migration are necessarily "good" or "bad"; rather, they are products of a series of decisions that need attention and thought when visualizing migration. This is especially crucial because of the vulnerable position of those who are refugees, asylum seekers, and forced migrants—from the vulnerability that led to migration to vulnerability in transit to vulnerability on arrival, as well as the vulnerability of these migrants to being positioned as what Du Bois ([1903] 1999) calls a "problem" in the broader public discourse of migration in the Global North. However, understanding the influence of compositional choices on visualizations of migration is an important step toward more fully realizing the possibilities of this genre.

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