IMAGINATIONS
REVUE D'ÉTUDES INTERCULTURELLES DE L'IMAGE · JOURNAL OF CROSS-CULTURAL IMAGE STUDIES

IMAGINATIONS
JOURNAL OF CROSS_CULTURAL IMAGE STUDIES |
REVUE D'ÉTUDES INTERCULTURELLES DE L'IMAGE

Publication details, including open access policy
and instructions for contributors:
http://imaginations.csj.ualberta.ca

Location and Dislocation

Editorial Team: Brent Ryan Bellamy, Daniel Laforest, Andriko Lozowy,
Tara Milbrandt, Carrie Smith-Prei, Sheena Wilson

September 6, 2017

To cite this article:
Light, Evan et al. "**Infrastructures of Dis/Connection: Of Drones, Migration, and Digital Care.**" *Imaginations* 8:2 (2017): Web (date accessed) 56-63.
DOI: 10.17742/IMAGE.LD.8.2.6

To link to this article:

http://dx.doi.org/10.17742/IMAGE.LD.8.2.6

INFRASTRUCTURES OF DIS/CONNECTION: OF DRONES, MIGRATION, AND DIGITAL CARE

EVAN LIGHT ET AL

EVAN LIGHT | YORK UNIVERSITY

JUTTA LAUTH BACAS | UNIVERSITY OF MALTA

DAPHNE DRAGONA | BERLIN

KATRIN M. KÄMPF | HUMBOLT UNIVERSITY

MARTA PEIRANO | WRITER, JOURNALIST, ACTIVIST

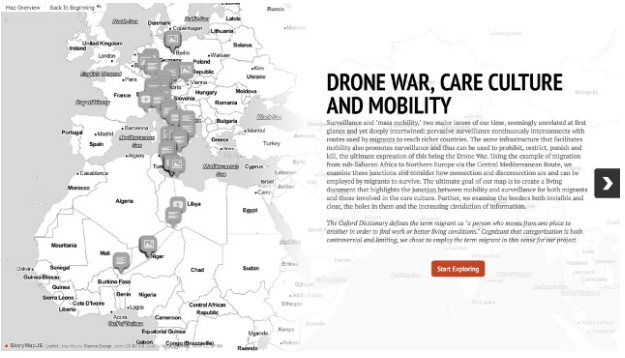
VALENTINA PELIZZER | ONEWORLD PLATFORM

CHRISTINA ROGERS | TECHNICAL UNIVERSITY OF DRESDEN

FLORIAN SPRENGER | GOETHE UNIVERSITY FRANKFURT

JARON ROWAN | BAU, CENTRO UNIVERSITARIO DE DISEÑO DE BARCELONA

ABIOL LUAL DENG | WASHINGTON, D.C.



Abstract

Migration from sub-Saharan Africa to Northern Europe is imagined and visualized as the movement of human bodies along different territories, eventually traversing the geographically locatable line of the EU border. What this conceptualization of migration, mobility, and the border leaves unacknowledged is that all three are material-virtual phenomena. This paper addresses the infrastructures of mobility that can be traced and analyzed within a migrant route from Niger to Germany. We highlight the need to connect and/or disconnect as strategies of migration and envisage ways to support freedom of movement by bringing aspects of digital care work into the analysis.

Résumé

La migration de l'Afrique subsaharienne vers l'Europe du Nord est imaginée et visualisée comme le mouvement des corps sur différents territoires, traversant éventuellement la ligne géographiquement localisable de la frontière de l'UE. Ce que cette conceptualisation de la migration, de la mobilité et de la frontière ne reconnaît pas, c'est que les trois sont des phénomènes matériels et virtuels. Cet article aborde les infrastructures de mobilité qui peuvent remontées et être analysées au sein d'une route migrante allant du Niger à l'Allemagne. Nous soulignons la nécessité de se connecter et/ou de se déconnecter en tant que stratégies de migration et envisageons des moyens d'appuyer la liberté de circulation en intégrant des aspects du travail en soins numériques dans l'analyse.

Please read this article alongside the StoryMap available here:

StoryMap: https://uploads.knightlab.com/storymapjs/04e9d-49ce98b0db02d668a4186813a79/drone-war-care-culture-and-the-in-frastructure-of-mobility/draft.html

DOI : http://dx.doi.org/10.17742/IMAGE.LD.8.2.6

Migration and Infrastructures of Mobility

In the current migration regime, the digital versions of migrants—their data shadows—can travel at high speed with complete disregard for national borders, often through the same undersea cables that carry intelligence and commands for drone operations in Sub-Saharan Africa. At the same time, the bodily versions of migrants may be stuck in refugee camps on the Greek Islands, in trafficking hotspots in Niger, or in detention centers in Libya. A complex net of infrastructures, consisting of undersea cables, databases, communication channels, physical borders, camps, and hotspots forms the backbone of this paradoxical assemblage of data flows and human (im)mobility.

Migration is an act of movement across borders that depends upon these infrastructures. The following introductory remarks give a basic outline of the theoretical framework that informed our work on the StoryMap. Technical infrastructures can be defined by their ability to transform something—objects, people, data—on different levels of scale (Larkin). In this sense, they foster movements between separate systems, highlighted throughout the map. By using infrastructures to travel, we are always crossing the visible and invisible borders that exist between these infrastructures. Migratory movements, as shown by the map, are characterized by the fact that they constantly need to cross borders and thus travel between different systems and their respective components. Due to their transformative impact on material forms and their distribution in time and space, as well as their literal state as passages of intersection, borders serve as media of exchange. Borders are places where objects are classified and categorized. They are, in other words, the unexchangable basis of exchange. By taking the agency of national borders into account, the infrastructural challenges of migration become evident and can be visualized while simultaneously highlighting the challenges of analyzing migration in the context of infrastructure studies. Two concepts helped us structure the patterns of migratory movement via infrastructures: connection/disconnection and digital care work.

Connecting and Disconnecting

In acts of migration, borders are the locations where infrastructural connections come into contact with active attempts to disconnect, while enforced disconnection—the need for migrants to stay beyond the registration apparatus—is confronted by the necessity of connection, such as staying in contact with other migrants and families and friends back home or at the destination. Connection implies the use of GPS, social media, or messaging applications and thus a reentry into a system where one is identified and observed. Crossing borders, a migrant regularly switches between these two modes—disconnection and connection—that quickly become tangible states of being once a border is encountered (Barney). Borders consist not only of walls and fences, officers and vehicles, weapons and visions, roads and traffic control but also of devices for digital registration, identification, tracking, and tracing—all relying upon data-centres, protocols and micro-decisions (on the status of borders, see Rumford; Johnson et al., and on the term micro-decisions, see Sprenger). The border is a place constructed around notions of standards, norms, and protocols and the gatekeepers who enforce these. At a border, individuals are identified and sorted, passing through a variety of systems that determine one's worth, one's politics, and one's validity (Walters). Data are obtained, baggage secured, vehicles scanned. Those who arrive at borders, in this sense, are forced to lay bare the clouds under which they travel. Border control is an intervention magnifying the scale of all that passes before it, mastering points of entry and exit, arrival and departure, or interminable stasis. As the StoryMap shows in selective detail, every person or object being disseminated into a new territory must have special properties or attributes depending on the infrastructures of distribution. As political-economic domains, such assemblages, in other words, connect and disconnect individuals, both willingly and unwillingly. Crossing a border illegally circumvents this apparatus of sorting and measurement, successfully appropriating infrastructures of mobility and employing the tactics of connection and disconnection.

Connection and disconnection may be necessary preconditions of today's migratory movements. The infrastructural challenges of migration are, indeed, challenges of connecting and disconnecting at the right time and at the right place. In this sense, migration is deeply embedded in the technical infrastructures that determine and enable movements from one place to another, across borders and over vast distances; this study focuses on the case of migrations from Niger to Northern Europe. The infrastructures that are employed by migrants following this path are not neutral, rather they are inscribed with a biopolitics – they provide for the distribution of people and things in space (Walters; Bigo; Heinemann and Weiß).

Digital Care Work

Movement, in the context of the StoryMap, is not restricted to human transportation, but necessarily includes the movement of information and objects as well as their obfuscation. Every migrant moves with data and objects that migrants try to maintain as invisible and thus untraceable, rendering themselves untraceable as well. Cross-border mobility therefore necessarily implies digital care work in the facilitation of dis/connection strategies. Care work is defined most often as intrinsically motivated and involves connecting to other people and helping people to meet their needs (Folbre). Taking into account the importance of digital technologies can expand the concept of care work more broadly. As data shadows becomes increasingly important to our lives (Leonelli et al.), work involving the care for these data shadows can be defined as digital care work. It enables connection as well as disconnection and education about the infrastructures of dis/connection.

Examples of digital care work include the provision of free Wifi hotspots in transit countries to and through Europe, strategic connections with other people while en route or with smugglers via smartphones and social-media channels, publicizing GPS coordinates while at sea, or supplying translation devices and respective applications to allow communication among migrants. Each care tactic requires a connection to human-technological infrastructures; a concern for one's own data shadow (Lyon; Haggerty and Ericson) compels strategies of disconnection, such as remaining outside the bounds of the EURODAC[1] database as long as possible on the way to a country of destination in Europe or beyond the reach of information gathered and used by Frontex, the European Border and Coast Guard Agency (Kasparek)[2]. These examples show a care for the digital self and the material-virtual interdependencies that make up cross-border mobility today. To make the infrastructure of digital care work visible, the StoryMap shows the different registers of care work along the voyage from Niger to Northern Europe.

Migrants, Cables, and Free Wifi Hotspots: Mapping Contexts

Legal conceptualizations of migration, mobility, and the border have largely ignored their material-virtual dimensions. Information systems and border-control technologies have externalized the European Union (EU) border far into Sub-Saharan Africa, internally into the Schengen Area,[3] and have even inscribed the border into the migrant body via biometrics (Amoore; Van der Ploeg; Broeders; Hess and Kasparek; Forschungsgruppe). Borders are no longer mere territorial markers, but instead have become gateways into different levels of measurement and sorting. Migration as such is often related to or even triggered by the "power of the virtual," that is, preemptive warfare and the use of drones in conflict areas or algorithmic risk-modeling that equates third-country nationals to potential terrorists, thus producing the visa restrictions that force people to walk to Europe (Guild). The constant negotiation between connection and disconnection during the process of migration can also be seen through the specific routes people take to avoid being captured in the EURODAC (European Dactyloscopy) system or detected by surveillance drones.

Our StoryMap explores how migration from sub-Saharan Africa to Northern Europe is imagined and often visualized as the movement of human bodies along different territories and finally across the geographically locatable line of the EU external border.[4] We examine these interrelations by focusing on the framework of mobility that can be traced and analyzed within a migrant route from Niger to Germany. By examining the respective local infrastructure—drone bases in Niger, the war in Libya, free Wifi options in Europe, fibre optic networks, "refugee hot spots," detention centers, and surveillance and information systems on the way to Germany—we demonstrate how delocalized networks and invisible data flows can have very specific (localizable and visible) effects on migration, mobility, and border practices and vice versa.

Through highlighting the infrastructures of a possible migrant route from Niger to Germany, it becomes apparent that political issues, conflict, or economic factors are not the only elements at play in the emergence of migrant escape routes. Increasingly, drone wars (Chamayou) and their effects on civilian populations play a significant role in creating the original impetus for migration to Europe. The materialized presence of implicated international actors can be seen in the installation of drone bases, drone activity, and drone strikes in many countries, such as Niger and Libya [see Drone Base et al. in map]. The proceedings of the drone war in many African countries are also inevitably linked to the development of drone programs in Europe, which, among other factors, are considered vital measures to restrict migrant movement at its southern borders or to detect and aid people in distress at the Mediterranean Sea [see Mediterranean Drone Proj-

ects in map]. This situation creates a loop between drone operations that generates migration from Sub-Saharan Africa to the EU, which counters with drone programs aimed at repelling cross-border mobility from the south.

The presence of drones in these areas creates respective infrastructures and networks of data exchange. Delocalized networks and invisible data flows facilitate the externalization of Europe's borders into Africa while enabling a deterritorialization of the virtual aspects of war into Europe. Drone-targeting operations in Africa or signals intelligence used in drone targeting is directed, processed, and analyzed within European countries. The command and control centers of the drone war and other AFRICOM[5] operations in countries such as Libya are physically located on military bases in Germany and may use intelligence gained from tapped undersea cables (Angwin et al.), from migrants interrogated by intelligence agencies or from drone surveillance flights through central and North Africa, including Libya or Mali.

One of the central infrastructures of these deterritorializations are submarine cables [see Submarine Cables in map]. Today, submarine cables transport most international phone calls and internet traffic and have been of interest to intelligence agencies for years (Starosielski). They are a central infrastructure of everyday communication but also play a role in the drone war. Some of them are being tapped by the National Security Agency (NSA) or the Government Communication Headquarters (GCHQ) for surveillance,[6] while others are used in drone operations, may be key tools for the inter-agency data exchange in anti-trafficking and border-control operations, or may be the route EURODAC input takes from Libya to Europe.[7]

EURODAC, the Visa Information System (VIS),[8] and the Schengen Information System I+II (SIS)[9] are information systems of the EU and associated Schengen States that support police cooperation and enforce migration policies, such as the Dublin Regulation or visa restrictions [see e.g. Border Control in Europe in map]. These databases demonstrate how borders are visible for some and invisible for others (Balibar). Visa requirements, for example, create divisions between "trusted travelers" and "risky people," whereby the latter category is generated in reference to the country of the visa applicant (M'charek et al.). The traditional sites of transit, like airports and harbors, thus become highly monitored spaces restricting mobility (Andreas and Snyder). For citizens of Niger, for instance, visa restrictions may lead to the creation of alternate routes to Europe by foot, bus, boat, or rubber dinghies.

These information systems are also the backbone infrastructure for the control and assertion of policy regulations concerning migration within the Schengen Area. They provide the databases and deliver the sorting systems for verification and identification (Adey), thereby preventing visa or passport fraud and "shopping" for asylum, and facilitate the detection of illegalized migrants, such as "visa-overstayers" and people breaking residency laws. Headquartered in Tallinn, Estonia, the European Agency for the operational management of large-scale IT Systems in the area of freedom, security, and justice (eu-Lisa)[10] is responsible for the operational management of all of these systems.

The geographic sites captured in various databases or through surveillance activities are often the same spaces where police and border security roam, but also where food, assistance, and shelter may be provided. Refugee camps, detention centers, hot spots, as well as International Organization for Migration (IOM)[11] transit centers (see IOM Niger; Tagging Refugees at Camps and Detention Centers in map) are among the infrastructures that restrict, regulate, and aid migration flows. International organizations and refugee agencies play a vital part in assisting migration, but can also become a form of "remote control" (Guiraudon and Lahav), as they become hubs where information is exchanged that again feeds the cycles of risk analysis by authorities such as the European Border and Coast Guard Agency (Frontex).

From the time they leave their home community, migrants constantly negotiate complicated relationships with communication technology and infrastructure. While some may be forced to abandon their mobile phones before crossing waters, others go to great lengths to document their journeys.[12,13] As explored in the StoryMap, refugees often have their biometric data processed in central Africa long before they arrive on Europe's shores. Likewise, mobile phones are commonly tied to the identity of their users, enabling the tracking of individuals while they communicate.

Care Culture

Understanding the irony that data shadows of migrants will travel faster than they do, possibly through the same infrastructure used in the drone wars, we believe it is important

to document the preexisting infrastructure that can facilitate online communication. Europe has a long tradition of hacker spaces and maker spaces, physical and social locations where individuals come together to embrace the freedom to create and experiment with technology and to provide communication tools to their local communities. Our map identifies a number of these spaces, providing a theoretical guide from coastal cities of Italy that often serve as migrant transit points, moving through Italy to common staging points for crossing the borders further north. We then trace a route through Austria and Germany, eventually arriving in Berlin.

Technology is involved in the structuring and policing of the borders of this journey, as well as providing important tools for crossing them and enabling the act of migration. Smartphones with GPS connectivity, digital maps, or communication tools to exchange information regarding open corridors and border policing are key features of transnational mobility today. In addition to highly important local infrastructures that provide food, housing, economic support, part-time employment, or transportation, other facilities such as electrical outlets, free WiFi hotspots, SIM cards, and translation applications offer vital components to people on the move. Digital care work can include the maintenance of free anonymous access to digital communication tools: multilingual websites, free WiFi hotspots that do not require login via social-media accounts, options for charging devices, or housing opportunities without registering online with one's legal status (see e.g. FreeForRefugee Wifi in map). This form of care is self-evident for migrants as well as activists and people in the trafficking industry and has created respective solidarity and economic networks. Furthermore, migrants are very much aware of their own data shadows. For instance, information on where fingerprint scans are fed into EURODAC in different parts of Europe is widely shared, allowing migrants to alter their routes to avoid documentation (Tsianos 121; Tsianos and Kuster 183). Care for the digital self is a significant part of migrant struggles and supporting networks should pay attention to its maintenance.

A Final Note on Terminology

A general concern with infrastructures cannot marginalize the terms and legal categories that regulate migration and greatly affect people crossing borders. Due to legal categorizations and respective terms, corresponding technical facilities are installed to produce divisions between forms of migration that create the material effects of the terms introduced on paper (see Eurodac in map), which, in turn, influences language use. Language must be considered as infrastructure too. "Legal migration," "illegal migration," and "refugeeism" are three main differentiations within the field of human mobility, particularly in relation to the ordering principle of so-called migration management (Ratfisch). In much scholarly work, it is therefore common to speak of "refugees and migrants" to acknowledge different statuses. This distinction, however, leads to an iteration of terms introduced top-down, delivering a template for discriminatory representations in which migrants appear as "villains" and refugees as "victims." Further, this terminology denies refugeeism from being a matter of choice and migrants the right to escape/flee, and affects self-perceptions and the practical realities of cross-border mobility. For instance, economic migrants may become refugees within a country along their migration route. A way to mirror these difficulties in terminology is to use the term "refugee migrant" (Hess et al.), as it shows the connection between these categorizations while leaving space for ambivalence. The Oxford English Dictionary defines a migrant as "a person who moves from one place to another in order to find work or better living conditions"; in the accompanying map, all categorizations have been subsumed under the term migration in order to highlight any migrant path from one place to another and to strengthen migration as a term of struggle. Many of the infrastructures described so far are deeply embedded in migration management through a structure of legal categorizations. Our goal here has been to provide an analysis of processes of migration as well as to replicate the migrant strategies of dis/connection with relation to existing terms that regulate migration. Infrastructures, as seen above, have the capacity to modulate. A care for the digital self and the digital other means acknowledging the ways technical infrastructures are linked to further frameworks that create and traverse the boundaries and borders that affect mobile subjects. The StoryMap renders visible the connections and exchanges in infrastructures of mobility while also taking the interstices into account in which cross-border mobility might not be readily legible or from which migrants strategically withdrawal or disconnect to make mobility happen.

This article and map are the products of a workshop entitled "Drone War, Care Culture and Mass Mobility" which was organized in October 2016 in Berlin, as part of the Berliner Gazette annual conference Tacit Futures.[14] Workshop participants were drawn from a broad array of backgrounds and

included journalists, activists, curators, international NGO workers, and academic researchers. Working together over the course of two days, we built a StoryMap[15] *tracing the journey of migrants from central Africa to Europe via the Mediterranean route, paying close attention to the flows of data and the use of communication infrastructure along the way.*

Works Cited

Adey, Peter. "Borders, Identification and Surveillance: New Regimes of Border Control." *Routledge Handbook of Surveillance Studies*. Editors David Lyon, Kevin D. Haggerty, and Kirstie Ball, Routledge, 2012, pp. 193-201.

Amoore, Louise. "Biometric Borders: Governing Mobilities in the War on Terror." *Political Geography*, 25, 3, 2006, pp. 336-51.

Andreas, Peter, and Timothy Snyder, eds. *The Wall Around the West: State Borders and Immigration Controls in North America and Europe*. Rowman & Littlefield, 2000.

Angwin, Julia, et. al. "AT&T Helped U.S. Spy on Internet on a Vast Scale". *The New York Times*. 15 Aug. 2015. www.nytimes.com/2015/08/16/us/politics/att-helped-nsa-spy-on-an-array-of-internet-traffic.html?_r=1. Accessed 26 Aug 2017.

Balibar, Etienne. "The Borders of Europe." *Cosmopolitics: Thinking and Feeling Beyond the Nation*. Editors Pheng Cheah and Bruce Robbins, University of Minnesota Press, 1998, pp. 216-231.

Barney, Darin. "We Shall Not Be Moved: On the Politics Of Immobility." *Theories of the Mobile Internet: Materialities and Imaginaries*. Editors. Jan Hadlaw, Thom Swiss, and Andrew Herman, Routledge, 2014, pp. 15-24.

Bigo, Didier. "Security and Immigration: Toward a Critique of the Governmentality of Unease." *Alternatives*, 27, 2002, pp. 63-92.

Brambilla, Chiara. "Exploring the Critical Potential of the Borderscapes Concept." *Geopolitics*, 20, 1, 2014, pp. 1-21.

Broeders; Dennis. "The New Digital Borders of Europe: EU Databases and the Surveillance of Irregular Migrants." *International Sociology*, 22, 1, 2007, pp. 7192.

Chamayou, Grégoise. *Théorie du drone*. La rabrique éditions, 2013.

Folbre, Nancy. "Who Cares? A Feminist Critique of the Care Economy." Rosa Luxemburg-Stiftung, 2004, www.rosalux-nyc.org/wp-content/files_mf/folbre_whocares.pdf, accessed 26 Aug. 2017.

—. "Caring Labor." *Republic Art*, Video transcript, www.republicart.net/disc/aeas/folbre01_en.htm, 2003, accessed 26 Aug. 2017.

Forschungsgruppe "TRANSIT MIGRATION". *Turbulente Ränder: Neue Perspektiven auf Migration an den Grenzen Europas*. Transcript, 2007.

Guild, Elspeth. "International Terrorism and EU Immigration, Asylum and Borders Policy: The Unexpected Victims of 11 September 2001." *European Foreign Affairs Review*, 8, 2003, pp. 331–346.

Guiraudon, Virginie, and Gallya Lahav. "Comparative perspectives on Border Control: Away from the Border and Outside the State." *The Wall Around the West: State Borders and Immigration Controls in North America and Europe*. Editors Peter Andreas, and Timothy Snyder, Rowman & Littlefield, 2000, pp. 55–81.

Haggerty, Kevin and Ericson, Richard. "The Surveillant Assemblage." *British Journal of Sociology*, 51, 4, 2000, pp. 605–622.

Heinemann, Torsten, and Martin Weiß. *An der Grenze. Die biotechnologische Überwachung von Migration*. Campus, 2017.

Hess, Sabine et. al. Editors *Der lange Sommer der Migration. Grenzregime III*. Assoziation A., 2017.

Hess, Sabine, and Bernd Kasparek. *Grenzregime: Diskurse, Praktiken, Institutionen in Europa*. Assoziation A., 2010.

Johnson, Corey et. al. "Interventions on Rethinking 'The Border' in Border Studies." *Political Geography*, 30, 2, 2011, pp. 61–69.

Kasparek, Bernd. "Laboratorium, Think Tank, Doing Border: Die Grenzschutzagentur Frontex." *Grenzregime. Diskurse, Praktiken, Institutionen in Europa*. Editors Sabine Hess and Bernd Kasparek. Assoziation A., 2010, pp. 111–126.

Larkin, Brian. "The Politics and Poetics of Infrastructure." *Annual Review of Anthropology*, 42, 2013, pp. 327-343.

Leonelli, Sabina, Brian Rappert and Gail Davies. "Data Shadows: Knowledge, Openness, and Absence." *Science, Technology, & Human Values*, 42, 9, 2016, pp. 191-202.

Lyon, David. "The Search for Surveillance Theories." *Theorizing Surveillance*. Routledge, 2006, pp. 3–20.

M'charek, Amade, Katharina Schramm, and David Skinner. "Topologies of Race: Doing Territory, Population and Identity in Europe." *Science, Technology, & Human Values*, 39, 4, 2014, pp. 468–487.

Newman, David. "Borders and Bordering. Towards an Interdisciplinary Dialogue." *European Journal of Social Theory*, 9, 2, 2006, pp. 171–186.

Parker, Noel; Vaughan-Williams, Nick. "Lines in the Sand? Towards an Agenda for Critical Border Studies." *Geopolitics*, 14, 3, 2009, pp. 582–587.

Ratfisch, Philipp. "Zwischen nützlichen und bedrohlichen Subjekten. Figuren der Migration im europäischen Migrationsmanagement am Beispiel des Stockholmer Programms." *Movements. Journal für Kritische Migrations- und Grenzregimeforschung* 1.1, 2015). movements-journal.org/issues/01.grenzregime/07.ratfisch—nuetzliche-bedrohliche-subjekte-stockholm-migrations-management.html. Accessed 26 Aug. 2017.

Rumford, Chris. "Theorizing Borders." *European Journal of Social Theory*, 9, 2, 2006, pp. 155–169.

Sprenger, Florian. *Politics of Micro-Decisions. Edward Snowden, Net Neutrality and the Architectures of the Internet*. Lüneburg: Meson Press, 2015.

Starosielski, Nicole. *The Undersea Network*. Duke University Press, 2015.

Tsianos, Vassilis."Feldforschung in den 'Mobile Commons'. Ein Interview mit Peter Ott und Ute Holl." *Zeitschrift für Medienwissenschaft* 12.1, 2015, pp. 115–125.

Tsianos, Vassilis and Brigitta Kuster. "Black Box Eurodac! Eine Akteur-Netzwerk-theoretische Untersuchung der digitalen Deportabilität." *An der Grenze. Die biotechnologische Überwachung von Migration*. Editors Torsten Heinemann and Martin Weiß, Campus, 2017, pp. 183–204.

Van der Ploeg, Irma. "The body as data in the age of information," *Routledge Handbook of Surveillance Studies*. Editors David Lyon, Kevin D. Haggerty, and Kristie Ball, Routledge, 2012, pp. 176–185.

Walters, William. "Reflections on Migration and Governmentality." *Movements: Journal für Kritische Migrations- und Grenzregimeforschung*. 1, 1, 2015. movementsjournal.org/issues/01.grenzregime/04.walters–migration.governmentality.html. Accessed 26 Aug. 2017.

—. "Border/Control." *European Journal of Social Theory*, 9, 2, 2006, pp. 187–203.

Notes

1 EURODAC has existed since 2003. The fingerprints of every asylum seeker in the European Union are transmitted to EURODAC. https://ec.europa.eu/home-affairs/what-we-do/policies/asylum/identification-of-applicants_en. For a detailed analysis of Eurodac until 2014, see http://www.statewatch.org/analyses/no-235-eurodac.pdf. The research leading to these results has received funding from the European Research Council under the European Union's Seventh Framework Programme (FP7/2007-2013) / ERC grant agreement n° 312454.

2 Frontex. http://frontex.europa.eu/

3 The border-free Schengen Area denotes the external borders of the European Border and permits for free and unrestricted movement between member states. https://ec.europa.eu/home-affairs/what-we-do/policies/borders-and-visas/schengen_en

4 On different concepts of the border see Newman; Parker and Vaughan-Williams; Brambilla. Concerning the relationship between movement of bodies and data see Amoore; Van der Ploeg.

5 AFRICOM. United States Africa Command. http://www.africom.mil/

6 Snowden Digital Surveillance Archive. https://snowdenarchive.cjfe.org/greenstone/cgi-bin/library.cgi?e=q-00100-00—off-0snowden1–00-2—-0-10-0—0—0direct-10—-4———-0-1l–10-en-50—50-about—01-3-1-00-00–4–0–0-0-01-10-0utfZz-8-00&a=q&r=1&hs=1&k=0&s=0&fqa-=0&fqv=undersea+cables,,,&fqf=TE,TT,DE,SU&fqk=&fqs=&fqc=and,and,and&fqaf=

7 More research and greater government transparency is needed in these areas.

8 http://ec.europa.eu/home-affairs/what-we-do/policies/borders-and-visas/visa-information-system_en

9 http://ec.europa.eu/home-affairs/what-we-do/policies/borders-and-visas/schengen-information-system_en

10 Eu-Lisa. http://www.eulisa.europa.eu/Pages/default.aspx

11 International Organization for Migration. http://www.iom.int/

12 Traces of Movement. Tacit Futures, Berlin. 27-29 October 2016. Hamed's Journey. http://berlinergazette.de/traces-of-movement/?page_id=2

13 Van Houtryve, Tomas. "Europe's Migrant Trail, Through The Instagrams of Refugees. Following the 'digital breadcrumbs' left by refugees on social media'. *The New Yorker*. 27 Jan. 2017, 2017.http://www.newyorker.com/culture/portfolio/following-europes-migrant-trail-through-the-instagrams-of-refugees

14 http://berlinergazette.de/tacit-futures/

15 http://storymap.knightlab.com/